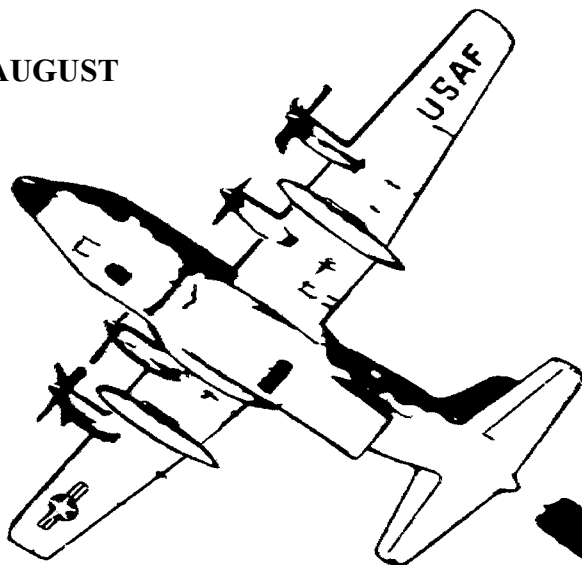


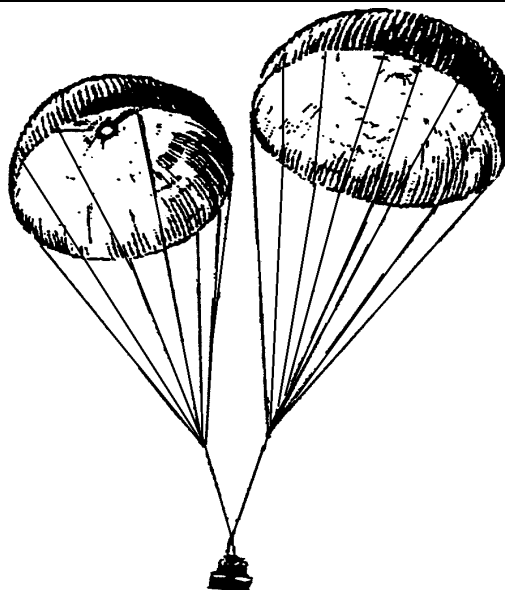
MAY - AUGUST

VOLUME II 1999



TRIENNIAL

**AIRDROP REVIEW
AND
MALFUNCTION/SAFETY
ANALYSIS**



PREPARED BY
THE US ARMY QUARTERMASTER SCHOOL
FORT LEE, VIRGINIA 23801-1502

AIRBORNE CREED

I am an Airborne trooper! A paratrooper!

I jump by parachute from any plane in flight. I volunteered to do it, knowing well the hazards of my choice.

I serve in a mighty Airborne Force—famed for deeds in war—renowned for readiness in peace. It is my pledge to uphold its honor and prestige in all I am—in all I do.

I am an elite trooper—a sky trooper—a shock trooper—a spearhead trooper. I blaze the way to far-flung goals—behind, before, above the foe's front line.

I know that I may have to fight without support for days on end. Therefore, I keep mind and body always fit to do my part in any airborne task. I am self-reliant and unafraid. I shoot true, and march fast and far. I fight hard and excel in every art and artifice of war.

I never fail a fellow trooper. I cherish as a sacred trust the lives of men with whom I serve. Leaders have my fullest loyalty, and those I lead never find me lacking.

I have pride in the Airborne! I never let it down!

In peace, I do not shirk the dulllest duty nor protest the toughest training. My weapons and equipment are always combat ready. I am neat of dress—military in courtesy—proper in conduct and behavior.

In battle, I fear no foe's ability, nor underestimate his prowess, power and guile. I fight him with all my might and skill—ever alert to evade capture or escape a trap. I never surrender, though I be the last.

My goal in peace or war is to succeed in any mission of the day—or die, if needs be, in the try.

I belong to a proud and glorious team—the Airborne, the Army, my Country. I am its chosen pride to fight where others may not go—to serve them well until the final victory.

*I am a trooper of the sky! I am my Nation's best!
In peace and war I never fail. Anywhere, anytime, in anything—
I am AIRBORNE!*

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PREFACE

The airdrop review and malfunction/safety analysis is published by the US Army Quartermaster School in hopes that by “passing the word” the malfunction rate within the Armed Forces may be minimized. The review and analysis in this issue covers the period 1 May 1999 - 31 August 1999.

POC AND MAILING ADDRESS

The POC for Airdrop Malfunction Reports, Monthly Airdrop Summary Reports, and any other information concerning the Airdrop Review and Malfunction/Safety Analysis is Mr. Roger Hale. All correspondence for the above reports and analysis should be addressed to:

**AERIAL DELIVERY AND FIELD SERVICES DEPARTMENT
ATTN MR ROGER HALE
USA QUARTERMASTER CENTER AND SCHOOL
1010 SHOP ROAD
FORT LEE VA 23801-1502**

CHANGE OF ADDRESS

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ATTN MR ROGER HALE
USA QUARTERMASTER CENTER AND SCHOOL
1010 SHOP ROAD
FORT LEE VA 23801-1502**

REPORTS AND ANALYSES

The Malfunction Review Board met at Fort Lee, Virginia on 20 - 21 October 1999. A breakdown of the areas in which malfunctions occurred from 1 May through 31 August 1999 follows:

<u>CATEGORY</u>	<u>QUANTITY</u>
Containers/CRRC	23
Platforms LVAD	20
Personnel	23

All DD Forms 1748-2 (Airdrop Malfunction Report (Personnel-Cargo)) are reviewed, and any identifying information is removed. Block 24 is annotated to include both Army and Air Force references if only one is given. No grammatical editing is done to the reports.

PERSONNEL MALFUNCTION REPORTS AND ANALYSES

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT CH-53E	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION		8. DATE AND TIME
9. ACFT ALTITUDE (Feet) 4000 AGL	10. ACFT SPEED (Knots) 100 KIAS	11. DZ ELEVATION (Feet) 300 MSL	12. SURFACE WINDS (Knots) Calm	13. VISIBILITY (Feet/Miles) Unlimited
II. PERSONNEL				
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT		15. EQUIPMENT WORN BY JUMPER Hollywood		16. JUMPER'S POSITION IN ACFT 2 of 2
17. TYPE PARACHUTE (Specify) MC-5 Static Line	18. TYPE MALFUNCTION			19. NO. JUMPS 21
	SEMI-INVERSION	INVERSION	CIGARETTE ROLL	
	PILOT CHUTE	BLOWN SECTION	BROKEN SUSPENSION LINE	
20. TYPE OF RESERVE MC-5	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31) <input type="checkbox"/> YES <input type="checkbox"/> NO		22. RESULTING INJURY None	

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Jumper exited ramp of aircraft in a head down position and his body rotated to the left. During deployment, the jumper's harness was pulled off his right shoulder, trapping his right arm to his side. Main parachute fully deployed. However due to the harness shifting, the canopy began a spiraling right hand turn. Jumper was unable to reach the main control toggle to release the brakes. Although the jumper had a full canopy, he could not gain control and decided to perform cut-away procedures at 3000 feet AGL using his left hand to pull the cut-away handle. Jumper was able to land on the DZ under his reserve.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Bad body position during exit. Improperly fitted harness.

CONTINUED ON NEXT PAGE

ANALYSIS: 1

WHAT WAS THE MALFUNCTION?

Uncontrollable canopy.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Improper fit of harness.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Personal fit of harness.
2. Detailed jumpmaster inspection.

TAR&M/SA VOL II

I. GENERAL					
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT Casa 212	5. ACFT SER NO.	
6. OPERATION/EXERCISE		7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 12,500 Feet	10. ACFT SPEED (Knots) 130	11. DZ ELEVATION (Feet) 419 MSL	12. SURFACE WINDS (Knots) 0	13. VISIBILITY (Feet/Miles) Unlimited	
II. PERSONNEL					
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT		15. EQUIPMENT WORN BY JUMPER None		16. JUMPER'S POSITION IN ACFT 1st Pass/1st Out	
17. TYPE PARACHUTE (Specify) MC-4	18. TYPE MALFUNCTION				19. NO. JUMPS 12
	<input checked="" type="checkbox"/> SEMI-INVERSION	<input type="checkbox"/> INVERSION	<input type="checkbox"/> CIGARETTE ROLL	<input type="checkbox"/> OTHER (SPECIFY)	
	<input checked="" type="checkbox"/> PILOT CHUTE	<input type="checkbox"/> BLOWN SECTION	<input type="checkbox"/> BROKEN SUSPENSION LINE		
20. TYPE OF RESERVE MC-4	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		22. RESULTING INJURY None		

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.) SM went through pull sequence, checked over his shoulder and seen no pilot parachute launch. He then checked a second time and again observed nothing. Jumper went into his cut-away procedures for a total malfunction. Opening alt 4000	
32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.) SM had a good arch, which caused the pilot parachute to sit in the vacuum. SM did not clear over his right shoulder. SM cut-away and landed safely on the drop zone.	

CONTINUED ON NEXT PAGE

ANALYSIS: 2

WHAT WAS THE MALFUNCTION?

Pilot parachute failed to launch.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Failure to check/clear over shoulder vigorously.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Second check should be more “vigorous” to clear air pocket, not just a head turn to the right.

TAR&M/SA VOL II

I. GENERAL					
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT CASA 212	5. ACFT SER NO.	
6. OPERATION/EXERCISE		7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 12,500 Ft AGL	10. ACFT SPEED (Knots) 90 Knots	11. DZ ELEVATION (Feet) 480 Feet	12. SURFACE WINDS (Knots) 5 Knots	13. VISIBILITY (Feet/Miles) Unlimited	
II. PERSONNEL					
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT		15. EQUIPMENT WORN BY JUMPER MC-4 Parachute System/ 02 Weapon/Rucksack		16. JUMPER'S POSITION IN ACFT 1st Jumper	
17. TYPE PARACHUTE (Specify) MC-4	18. TYPE MALFUNCTION				19. NO. JUMPS 12
	SEMI-INVERSION	INVERSION	CIGARETTE ROLL	OTHER (SPECIFY)	
	PILOT CHUTE	BLOWN SECTION	BROKEN SUSPENSION LINE	See Item #32	
20. TYPE OF RESERVE MC-4	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		22. RESULTING INJURY None		

<p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>After exiting the aircraft at 12,500 feet AGL, jumper initiated his main pull sequence at 4,00 feet AGL. He realized he had grabbed the 02 hose and was unable to clear his main. The jumper let go of the hose and main ripcord. He realized that he now had a floating ripcord grip. The jumper did not make a second attempt to pull his main ripcord grip. He then executed emergency procedures for a total malfunction. He had a fully deployed reserve at 2,700 feet AGL and landed on the DZ with no further incident.</p>
<p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>The main canopy was recovered in a deployed state. A 100% TRI was performed on the main canopy and pilot parachute, no abnormalities were found. Jumper failed to perform a second attempt to deploy his main canopy. The jumper initiated emergency procedures for a total malfunction. The reserve deployed without incident. While under the reserve canopy, the jumper's FF2 activated and allowed the main to fall free of his packtray.</p>

CONTINUED ON NEXT PAGE

ANALYSIS: 3

WHAT WAS THE MALFUNCTION?

Jumper induced floating rip cord.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Grabbed O2 hose when reaching for ripcord. Pulled both, reaching full extent of O2 hose not allowing for full travel of ripcord.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Good visual check of ripcord prior to pull.

TAR&M/SA VOL II

I. GENERAL					
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.	
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME		
9. ACFT ALTITUDE (Feet) 10,000	10. ACFT SPEED (Knots) 130	11. DZ ELEVATION (Feet) 148	12. SURFACE WINDS (Knots) 8	13. VISIBILITY (Feet/Miles) VFR	
II. PERSONNEL					
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT		15. EQUIPMENT WORN BY JUMPER Oxygen	16. JUMPER'S POSITION IN ACFT 1/1 Ramp		
17. TYPE PARACHUTE (Specify) MC-4	18. TYPE MALFUNCTION				19. NO. JUMPS Not Available
	SEMI-INVERSION	INVERSION	CIGARETTE ROLL	OTHER (SPECIFY)	
	PILOT CHUTE	BLOWN SECTION	BROKEN SUSPENSION LINE	Failure to locate rip cord	
20. TYPE OF RESERVE MC-4	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31) <input type="checkbox"/> YES <input type="checkbox"/> NO		22. RESULTING INJURY None		

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Jumper experienced a failure to locate the main ripcord handle while in a flat and stable pull sequence. After two attempts to locate it, jumper successfully initiated cutaway/reserve deployment procedures and landed without incident.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Lack of jumper proficiency using oxygen equipment. Additionally there was no retainer on the oxygen mask hose which obstructed the view of the ripcord handle. Though this inspection point is taught at the HALO JM course, it is not identified in the current FM 31-19 and was overlooked by the JM. Question: Is this included in the new revision?

CONTINUED ON NEXT PAGE

ANALYSIS: 4

WHAT WAS THE MALFUNCTION?

Failure to find main rip cord.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Obstructed view due to improperly retained 02 hose.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Include inspection point in FM 31-19.
2. Ensure inspection/pre-jump procedures are followed.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-141	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION		8. DATE AND TIME
9. ACFT ALTITUDE (Feet) 12,500 Feet AGL	10. ACFT SPEED (Knots) 130 KIAS	11. DZ ELEVATION (Feet) 1893 Feet	12. SURFACE WINDS (Knots) 4 Knots	13. VISIBILITY (Feet/Miles) Unlimited
II. PERSONNEL				
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT		15. EQUIPMENT WORN BY JUMPER Rucksack, Weapon, Gentex, Goggles, Gloves, Altimeter		16. JUMPER'S POSITION IN ACFT 6
17. TYPE PARACHUTE (Specify) MC-4	18. TYPE MALFUNCTION			
	SEMI-INVERSION	INVERSION	CIGARETTE ROLL	OTHER (SPECIFY)
	PILOT CHUTE	BLOWN SECTION	BROKEN SUSPENSION LINE	Pilot Parachute Hesitation
19. NO. JUMPS 2				
20. TYPE OF RESERVE MC-4	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		22. RESULTING INJURY None	
31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.) Exited aircraft, waved off at 4000 feet, pulled at 3500 feet looked back and saw pilot parachute bouncing around on back, felt it hitting my feet. Still nothing, so looked once more vigorously then cutaway. Had reserve canopy at about 2200 feet.				
32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.) Jumper was observed pulling with a delayed main pilot parachute deployment. Reserve parachute was then observed with main parachute system falling away. No damage to the equipment resulted and no defects were found with the system.				

CONTINUED ON NEXT PAGE

ANALYSIS: 5

WHAT WAS THE MALFUNCTION?

Pilot parachute hesitation.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Improper clearing procedures.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Proper execution of pull procedure.
2. Emphasize proper pull procedures during pre-jump.
3. Unit needs to provide more information.

TAR&M/SA VOL II

I. GENERAL					
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT CASA 212	5. ACFT SER NO.	
6. OPERATION/EXERCISE		7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 12,500 Feet AGL	10. ACFT SPEED (Knots) 110 KIAS	11. DZ ELEVATION (Feet) 1893 Feet	12. SURFACE WINDS (Knots) 4-6 Knots	13. VISIBILITY (Feet/Miles) Unlimited	
II. PERSONNEL					
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT		15. EQUIPMENT WORN BY JUMPER Gentex, Goggles, Gloves, Altimeter		16. JUMPER'S POSITION IN ACFT 14	
17. TYPE PARACHUTE (Specify) MC-4	18. TYPE MALFUNCTION				19. NO. JUMPS
	<input checked="" type="checkbox"/> SEMI-INVERSION	<input type="checkbox"/> INVERSION	<input type="checkbox"/> CIGARETTE ROLL	<input type="checkbox"/> OTHER (SPECIFY)	
	<input checked="" type="checkbox"/> PILOT CHUTE	<input type="checkbox"/> BLOWN SECTION	<input type="checkbox"/> BROKEN SUSPENSION LINE	Main & Reserve Entanglement	
20. TYPE OF RESERVE MC-4	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		22. RESULTING INJURY None		

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Exited the CASA at 12,500 feet, normal jump, broke away at 5,500 from some other jumpers and pulled at 3,500 feet. When I pulled, I saw the pilot parachute jump out of the container. I turned back to earth waiting for opening shock. The opening shock did not happen so I did the hard reclear that did not work, so I initiated cutaway procedures. When I looked up at the reserve I saw that it had deployed but the main had intangled with it. So I grabbed any and everything I could and began pulling on them. After about a thousand feet or so a couple of cells on the reserve opened and at 100 feet off the ground a couple more cells opened. Four cells were opened so I bicycled until right before I hit then PLF.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Jumper was observed waving off and pulling. The main pilot parachute seemed to do nothing. The reserve parachute was observed deploying and then the main pilot parachute, main canopy and risers then fired into reserve resulting in an entanglement. The reserve canopy seemed to be choked off by the main parachute system. Jumper was unable to clear the entanglement successfully landing with approximately 4 cells of the reserve canopy. The parachute system involved had no resulting damage and no defects were found after inspection. After analyzing the malfunction, it is evident that the jumper had a pilot parachute hesitation. After unsuccessfully trying to clear the pilot parachute, the jumper then performed emergency procedures. While the reserve parachute deployed, it put the jumper in an upright attitude clearing the dead space in which the main pilot parachute was caught. The main parachute system then fired into the reserve entangling both canopies.

CONTINUED ON NEXT PAGE

ANALYSIS: 6

WHAT WAS THE MALFUNCTION?

1. Pilot parachute hesitation.
2. Dual canopy deployment entanglement.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Improper clearing procedures.
2. Improper cutaway procedures.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Proper execution of pull procedure.
2. Emphasize proper pull and clearing procedures during pre-jump.

TAR&M/SA VOL II

I. GENERAL					
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.	
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME		
9. ACFT ALTITUDE (Feet) 6,000 Feet	10. ACFT SPEED (Knots) 125 KIAS	11. DZ ELEVATION (Feet) 6 Feet	12. SURFACE WINDS (Knots) 320/6	13. VISIBILITY (Feet/Miles) 6+ Miles	
II. PERSONNEL					
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT		15. EQUIPMENT WORN BY JUMPER Video pouch with mini-cam lens helmet		16. JUMPER'S POSITION IN ACFT 1, 7, Ramp	
17. TYPE PARACHUTE (Specify) Non-standard	18. TYPE MALFUNCTION				19. NO. JUMPS 736
	SEMI-INVERSION	INVERSION	CIGARETTE ROLL	OTHER (SPECIFY)	
	PILOT CHUTE	BLOWN SECTION	BROKEN SUSPENSION LINE	Uncontrollable freefall canopy	
20. TYPE OF RESERVE Raven III (non-standard)	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31) <input type="checkbox"/> YES <input type="checkbox"/> NO		22. RESULTING INJURY None		

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Upon opening, main canopy began spiraling right turns, pulled on steering toggles, turns decreased, let up on toggles, turns started again, determined canopy was uncontrollable, executed cutaway procedures.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Steering toggle likely came loose during opening sequence and wrapped around suspension lines. Video shows right toggle was entangled with lines.

CONTINUED ON NEXT PAGE

ANALYSIS: 7

WHAT WAS THE MALFUNCTION?

Non-standard.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Availability.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Not Given.

TAR&M/SA VOL II

I. GENERAL					
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.	
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME		
9. ACFT ALTITUDE (Feet) 10,000 MSL	10. ACFT SPEED (Knots) 130 KIAS	11. DZ ELEVATION (Feet) 5,000 MSL	12. SURFACE WINDS (Knots) 6-10 Knots	13. VISIBILITY (Feet/Miles) Unlimited	
II. PERSONNEL					
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT		15. EQUIPMENT WORN BY JUMPER Large pack, exposed M16-A2, MC-5		16. JUMPER'S POSITION IN ACFT 1st Man/7	
17. TYPE PARACHUTE (Specify) MC-5 RAPS MFF Configured	18. TYPE MALFUNCTION				19. NO. JUMPS Approx 80
	SEMI-INVERSION	INVERSION	CIGARETTE ROLL	OTHER (SPECIFY)	
	PILOT CHUTE	BLOWN SECTION	BROKEN SUSPENSION LINE	Pulled during unstable body posit	
20. TYPE OF RESERVE MC-5 RAPS	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		22. RESULTING INJURY None		

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

SNM was to lead a six man stick of MC-5 transitioning students off the ramp of a C-130. SNM was jumping a military freefall configured MC-5 parachute system. SNM was directed to lead the stick out on a five second delay and deploy his parachute. As stick leader, SNM would then lead the students into the drop zone. The MFF parachutists were alert and had received all jump briefs and commands prior to and during the parachute operation. SNM exited the ramp of the aircraft at an altitude of 10,000 MSL (5000 feet AGL). SNM performed a diving exit with a front mounted rucksack. The parachutist immediately went into a head down attitude. The jumpmaster noticed the parachutist's position and stated that he was on his left side and facing the direction of flight. The jumpmaster watched the parachutist deploy his main canopy in this position at which time he turned his attention back to the transitioning students. After the last student exited the ramp, the jumpmaster observed another canopy deploying below the students. The SNM stated that he may have been flipping on his back during his pull sequence. After deploying his canopy, SNM stated that some of his lines and risers were entangled on his equipment. He then stated that he could not look up and check canopy or do a controllability check. SNM then made the decision to cut away his main canopy. SNM stated that he was at 4,000 feet AGL when he made the decision to cut away. Furthermore, during cut away procedures, the SNM tried to pull his main release handle, but it would not release. SNM then had to use both hands to pull the main release handle. After pulling his main release handle, SNM then pulled his reserve ripcord. The reserve canopy fully opened and the main canopy released from the harness.

CONTINUED ON NEXT PAGE

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

A thorough inspection of the canopy and harness assembly was performed. There was no indication that the parachutist's equipment was the cause of this malfunction. After taking statements from the jumpmaster and the above SNM, it was determined that an unstable body position caused the parachutist's main canopy to become entangled with his equipment and legs. SNM could not gain control of his parachute and made the decision to cut away. SNM cut away his main canopy at approximately 4,000 feet AGL and landed with his reserve canopy safely and uninjured on the drop zone.

ANALYSIS: 8**WHAT WAS THE MALFUNCTION?**

Line entanglement with equipment.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Unstable pull.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Stable body position.

TAR&M/SA VOL II

I. GENERAL					
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.	
6. OPERATION/EXERCISE		7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 13,000 AGL	10. ACFT SPEED (Knots) 130 KIAS	11. DZ ELEVATION (Feet) 5,000 MSL	12. SURFACE WINDS (Knots) 5-10 Knots	13. VISIBILITY (Feet/Miles) Unlimited	
II. PERSONNEL					
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT		15. EQUIPMENT WORN BY JUMPER Twin 53, MBU-12/P, Large Alice Pack		16. JUMPER'S POSITION IN ACFT 2 out of 5	
17. TYPE PARACHUTE (Specify) MC-5 RAPS MFF Configured	18. TYPE MALFUNCTION				19. NO. JUMPS Approx 83
	SEMI-INVERSION	INVERSION	CIGARETTE ROLL	OTHER (SPECIFY)	
	PILOT CHUTE	BLOWN SECTION	BROKEN SUSPENSION LINE	Unstable/Improper pull altitude	
20. TYPE OF RESERVE MC-5 RAPS	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		22. RESULTING INJURY None		

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

SNM was jumping an MC-5 RAPS in the freefall configuration. SNM was wearing an MBU-12/P oxygen mask, twin 53 portable oxygen system, and a large Alice Pack without a weapon. SNM was the second man of a five man stick to exit the ramp of a C-130. The exit altitude was 13,000 feet AGL (18,000 feet MSL). SNM exited the aircraft with no problems. SNM was stable in flight until reaching the altitude of 6,000 feet AGL. At this altitude, SNM stated that his oxygen mask began to ride up on his face, blocking his vision. SNM moved the mask down without incident. Between 6,000 and 4,000 feet AGL, SNM's mask moved upward on his face several more times. SNM began his pull sequence at the prescribed altitude of 4,00 feet AGL when he became unstable and began to tumble. SNM attempted to pull his main ripcord, but failed to see it or locate it (first attempt). SNM continued to tumble, losing altitude. SNM attempted to locate the main ripcord by tracing down the harness, but failed (second attempt). After this attempt, SNM decided to perform cut away procedures. SNM stated that during cut away procedures, the oxygen mask was still blocking his vision. He then felt for his main release handle and reserve ripcord. SNM then performed cutaway procedures. The reserve canopy opened properly and SNM landed safely off the drop zone. Upon landing on the drop zone, SNM noticed his AR2, automatic ripcord release had fired. SNM stated that his AR2 must have fired while he was performing cutaway procedures. SNM was unsure of the altitude at which his reserve canopy had opened.

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32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

After a thorough inspection of the MC-5 parachute system utilized by the jumper, the following was noted: (1) The main parachute was still inside the main container and never deployed. (2) The main ripcord was out of the elastic stow pocket (floating). (3) The main canopy 3 ring release assemblies on both left and right risers had released properly. (4) The reserve canopy was deployed and worked properly. (5) The AR2 automatic release had fired and was set at the prescribed altitude of 6500 feet MSL. 1500 feet above the drop zone elevation (5000 feet MSL). (6) AR2 was properly serviced and the test due date is due on 18 Nov 99. (7) Both the main release handle and reserve ripcord were pulled out of their respective pockets. The jumper's oxygen mask was properly fitted before the parachute operations commenced. SNM did not complain of any oxygen equipment problems (i.e. fit, leaks around the eyes etc) prior to jumping. The Drop Zone Safety Officer/Malfunction NCO operating the drop zone during this particular parachute drop observed four canopies open together. Due to the release point and location of the sun, the DZSO could not track the jumpers after exit. The DZSO only observed four canopies open together at the prescribed altitude of 4,000 feet AGL, and relayed his observation back to the aircraft. The aircraft then relayed to the DZSO that five MFF parachutists left the aircraft. The DZSO and DZ crew immediately began to scan the sky and horizon for the fifth canopy/jumper. A fifth canopy was not spotted, so the DZSO aborted the aircraft's next pass. The DZSO and DZ crew continued to scan the horizon in hopes of spotting the fifth canopy. The four jumpers who opened at the prescribed altitude were already landing on the drop zone and a fifth jumper was still unaccounted for. Once all four jumpers had landed, the above jumper (2nd man out) relayed in via radio that he had performed a cutaway and landed off the drop zone. The SNM was picked up by a vehicle and brought to the drop zone where he was questioned by the jumpmaster. SNM was definitely lower than all the other jumpers in his stick. His canopy deployment/cutaway was not seen by anyone on the drop zone. SNM was near the ARs activation range (between 2,00 feet AGL-1,000 feet AGL) due to the fact that the ARs he was using activated.

ANALYSIS: 9**WHAT WAS THE MALFUNCTION?**

This is an incident report not a malfunction.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Improper fit of equipment.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Maintain situational awareness.
2. Proper donning of equipment including ancillary equipment.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION		8. DATE AND TIME
9. ACFT ALTITUDE (Feet) 8,000 AGL	10. ACFT SPEED (Knots) 130 KIAS	11. DZ ELEVATION (Feet) 5,000 MSL	12. SURFACE WINDS (Knots) 5-8 Knots	13. VISIBILITY (Feet/Miles) Unlimited
II. PERSONNEL				
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT		15. EQUIPMENT WORN BY JUMPER MC-5, Twin 53, MBU-12P, Gentex		16. JUMPER'S POSITION IN ACFT #3/2nd pass
17. TYPE PARACHUTE (Specify) MC-5 RAPS	18. TYPE MALFUNCTION			
	SEMI-INVERSION	INVERSION	CIGARETTE ROLL	OTHER (SPECIFY)
	PILOT CHUTE	BLOWN SECTION	BROKEN SUSPENSION LINE	Har entanglement/ poor ramp exit
19. NO. JUMPS 23				
20. TYPE OF RESERVE MC-5 RAPS	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		22. RESULTING INJURY None	

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

SNM exited the ramp of a C-130 at an altitude of 8,000 feet AGL (13,000 feet MSL). SNM was jumping the MC-5 RAPS in the static-line configuration. SNM was making an oxygen jump without combat equipment, utilizing the Twin 53 portable oxygen system and MBU-12/P oxygen mask. SNM exited the aircraft on the jumpmaster's signal and executed the STAB (step and bend) exit. SNM stated that upon exit, he immediately felt out of position and twisted by the parachute opening. He stated that he was under a mostly inflated canopy which appeared to be curled in on the right side. The SNM also stated his right arm was pinned to his body (against his chest), with the elbow bent at about a 45 degree angle. He then stated his upper body was bent forward, but does not recall seeing risers across his chest. SNM stated that his canopy was in a moderate right spin, and his rate of descent seemed normal. AT 7,000 feet AGL, SNM made an attempt to free his right arm, but was unsuccessful. He then released his left toggle with his left hand (his right arm was still pinned against his chest), and was able to stop the right spin. He continued to try to free his right arm but was unsuccessful. At 6,000 feet AGL, he performed cut away procedures. With his left hand, he pulled the main release handle and immediately felt the main canopy release and the reserve parachute open. He did not pull the reserve ripcord. His altitude at the point was 5,000 feet AGL. Once the reserve canopy opened, SNM's right arm was free and he landed on the drop zone without incident.

CONTINUED ON NEXT PAGE

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

After a thorough inspection of the main canopy, no problems with the operational aspect of the equipment were found. The right control toggle was still stowed and was never pulled out of the stow pocket. This gives explanation to the moderate right spin of the main canopy after deployment. There was no indication that the control toggle was jammed into the control line guide rings. The control line was stowed properly, but never pulled from the main finger trap loop. The control lines were measured and were in accordance with the specifications outlined in TM 09770A-12&P/1A. During the inspection, the reserve ripcord was found still stowed in the elastic stow pocket. The reserve ripcord was never pulled during cutaway procedures. Possible caused for the right arm entanglement in the harness may have been caused by a very poor exit off the ramp. The jumpmaster and several Marines behind the above jumper stated that the plane lurched/banked to the right as the above jumper stepped off the ramp. This caused the jumper to leave the ramp at an approximate 45 degree angle, causing a poor STAB exit. The SNM had minor bruises under his right arm. An explanation on what caused these bruises are unknown at this time.

ANALYSIS: 10**WHAT WAS THE MALFUNCTION?**

Harness entanglement.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Loose harness which allowed the jumper to partially come out of the harness.
2. Improper JMPI.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. More emphasis during pre-jump on proper fit of the harness.
2. Jumpmaster needs to check proper fit during JMPI sequence.

TAR&M/SA VOL II

I. GENERAL					
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.	
6. OPERATION/EXERCISE		7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 6,000 AGL	10. ACFT SPEED (Knots) 130 KTS	11. DZ ELEVATION (Feet) 6	12. SURFACE WINDS (Knots) 310@4	13. VISIBILITY (Feet/Miles) 7+	
II. PERSONNEL					
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT		15. EQUIPMENT WORN BY JUMPER None		16. JUMPER'S POSITION IN ACFT 2/4	
17. TYPE PARACHUTE (Specify) Sharpshooter/ Non-Standard	18. TYPE MALFUNCTION				19. NO. JUMPS 1662
	SEMI-INVERSION	INVERSION	CIGARETTE ROLL	OTHER (SPECIFY)	
	PILOT CHUTE	BLOWN SECTION	BROKEN SUSPENSION LINE	Tension Knot	
20. TYPE OF RESERVE Tempo	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31) <input type="checkbox"/> YES <input type="checkbox"/> NO		22. RESULTING INJURY None		

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Jumper encountered normal opening sequence at 2,500 feet AGL. After deployment, parachutist was sent into a violent left hand turn, jumper attempted to clear the malfunction but was unsuccessful. Jumper determined that canopy was uncontrollable, and cutaway at approximately 2,000 feet AGL. Reserve deployed properly, jumper landed safely on the point of impact.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Unknown

CONTINUED ON NEXT PAGE

ANALYSIS: 11

WHAT WAS THE MALFUNCTION?

Did not review. Not standard equipment.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Not given.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Not given.

I. GENERAL					
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.	
6. OPERATION/EXERCISE		7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 12,500 AGL	10. ACFT SPEED (Knots) 130 KIAS	11. DZ ELEVATION (Feet) 5,000 MSL	12. SURFACE WINDS (Knots) 8-10 Knots	13. VISIBILITY (Feet/Miles) Unlimited	
II. PERSONNEL					
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT		15. EQUIPMENT WORN BY JUMPER Alice Pack, MBU-12/P, Twin 53		16. JUMPER'S POSITION IN ACFT #4 stick 2	
17. TYPE PARACHUTE (Specify) MC-5 RAPS	18. TYPE MALFUNCTION				19. NO. JUMPS 27
	SEMI-INVERSION	INVERSION	CIGARETTE ROLL	OTHER (SPECIFY)	
	PILOT CHUTE	BLOWN SECTION	BROKEN SUSPENSION LINE	Arm Entgl/ Poor exit	
20. TYPE OF RESERVE MC-5 RAPS	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		22. RESULTING INJURY None		

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

SNM exited the ramp of a C-130 at an altitude of 12,500 feet AGL. SNM was wearing a large Alice Pack, MBU-12/P oxygen mask and the Twin 53 portable oxygen system. SNM was the fourth man on the second pass to exit the aircraft. SNM stated that the opening shock of his parachute was particularly violent. He recalled having twists in his risers. Once the twists came out of his risers, he then stated that his right arm was pinned against his right side. Furthermore, he was bent down and to the right in his harness. He stated the parachute was in a moderate right spin. SNM stated at approximately 10,000 feet AGL, he attempted to free his arm, but was unsuccessful. He then released his left toggle in an attempt to control his parachute. After doing this, he continued repeated attempts to free his right arm, but again was unsuccessful. At approximately 8,000 feet AGL, SNM decided to perform cutaway procedures. During cutaway procedures, SNM reached across his chest with his left hand and grasped the main release handle. He pulled the pillow out of the Velcro, but was unable to free the cable housings. At approximately 6,000 feet AGL, the main release handle released and the main canopy detached from the harness. As SNM fell free from the main canopy, he stated that his right arm came free from the equipment which pinned it against his right side. He then pulled the reserve ripcord with his left hand. His reserve parachute opened at approximately 5,000 feet AGL. SNM landed safely off the drop zone without injury.

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32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

After thorough inspection of the parachute system and equipment, no problems or packing discrepancies were found. The right toggle on the main canopy was still stowed which gives explanation to the right spin of the canopy. The main release handle was not found, therefore an inspection on the cables could not be performed. However, a detailed inspection of the cable housings and main risers were completed, and no discrepancies with the housings or main risers were discovered. SNM could not describe nor explain what piece of equipment pinned his arm against his side. A definite cause of this malfunction leading up to this cutaway is unknown at this time. However, the suspected cause of this malfunction may have been caused by a very poor exit off the ramp, causing SNM to flip through his risers.

ANALYSIS: 12**WHAT WAS THE MALFUNCTION?**

Harness entanglement.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Loose harness which allowed the jumper to partially come out of the harness.
2. Improper JMPI.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. More emphasis during pre-jump on proper fit of the harness.
2. Jumpmaster needs to check proper fit during JMPI sequence.

TAR&M/SA VOL II

I. GENERAL					
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.	
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME		
9. ACFT ALTITUDE (Feet) 12,500 AGL	10. ACFT SPEED (Knots) 130 Knots	11. DZ ELEVATION (Feet) 148 Feet MSL	12. SURFACE WINDS (Knots) 5 Knots	13. VISIBILITY (Feet/Miles) +7	
II. PERSONNEL					
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT		15. EQUIPMENT WORN BY JUMPER Gentex, 02 equipment, LPU-10/P Altimeter		16. JUMPER'S POSITION IN ACFT 4	
17. TYPE PARACHUTE (Specify) MC-4	18. TYPE MALFUNCTION				19. NO. JUMPS 94
	SEMI-INVERSION	INVERSION	CIGARETTE ROLL	OTHER (SPECIFY)	
	PILOT CHUTE	BLOWN SECTION	BROKEN SUSPENSION LINE		
20. TYPE OF RESERVE MC-4 Reserve	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31) <input type="checkbox"/> YES <input type="checkbox"/> NO		22. RESULTING INJURY None		

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Jumper pulled main ripcord at 3,500 feet AGL. It appeared to the jumper that the pilot parachute wrapped around the suspension lines below the slider, there by not allowing the canopy to inflate properly. At that time the jumper began to spin violently in a clockwise direction. Jumper then initiated cutaway proceduers. The jumper landed safely and with no injuries

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Pilot parachute intangled with suspension lines. Probably due to a pilot parachute hesitation.

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ANALYSIS: 13

WHAT WAS THE MALFUNCTION?

The pilot parachute intangled with suspension lines due to pilot parachute hesitation.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Rubber retainer band might have allowed a line dump early causing the pilot parachute to get wrapped up in the lines.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Lacking enough information to come to a conclusion.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT Twin Otter	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION		8. DATE AND TIME
9. ACFT ALTITUDE (Feet) 11,000 AGL	10. ACFT SPEED (Knots) 90 knots	11. DZ ELEVATION (Feet) 12,500 MSL	12. SURFACE WINDS (Knots) Calm Wind	13. VISIBILITY (Feet/Miles) Clear
II. PERSONNEL				
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT		15. EQUIPMENT WORN BY JUMPER Head protection, goggles, jumpsuit		16. JUMPER'S POSITION IN ACFT 4th man
17. TYPE PARACHUTE (Specify) MC-5	18. TYPE MALFUNCTION			19. NO. JUMPS 450
	SEMI-INVERSION	INVERSION	CIGARETTE ROLL	
	PILOT CHUTE	BLOWN SECTION	BROKEN SUSPENSION LINE	See #31
20. TYPE OF RESERVE 10C	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		22. RESULTING INJURY None	

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Indiviudal was able to deploy reserve parachute without any incident. All equipment was recovered.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

18. Main canopy appeared tangled with lines, failed to inflate, slider did not descent.
31. Parachute was inspected upon landing and no discrepancies noted other than being tangled up. Jumper packed parachute with 7-level doing rigger checks as required.

CONTINUED ON NEXT PAGE

ANALYSIS: 14

WHAT WAS THE MALFUNCTION?

1. Main canopy tangled up with lines.
2. Failed to inflate.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Improper packing procedures possible.
2. Possibly not properly inspected.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Not Given.

TAR&M/SA VOL II

I. GENERAL					
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT KC-130	5. ACFT SER NO.	
6. OPERATION/EXERCISE		7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 800 Feet	10. ACFT SPEED (Knots) 125 Knots	11. DZ ELEVATION (Feet) 148 Feet	12. SURFACE WINDS (Knots) 170/05	13. VISIBILITY (Feet/Miles) 7+	
II. PERSONNEL					
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT		15. EQUIPMENT WORN BY JUMPER LBE, rucksack		16. JUMPER'S POSITION IN ACFT #5, 1st stick	
17. TYPE PARACHUTE (Specify) MC1-1C	18. TYPE MALFUNCTION				19. NO. JUMPS 25 S/L
	SEMI-INVERSION	INVERSION	CIGARETTE ROLL	OTHER (SPECIFY)	
	PILOT CHUTE	BLOWN SECTION	BROKEN SUSPENSION LINE	canopy entanglement	
20. TYPE OF RESERVE Chest Reserve	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31) <input type="checkbox"/> YES <input type="checkbox"/> NO		22. RESULTING INJURY None		

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)	
Canopy entanglement at approximately 100 feet. Ruck lowered by higher jumper through lower jumper's rear H-TC modification panels. Lower jumper deployed reserve. Reserve had partial inflation prior to landing.	
32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)	
Lack of canopy control and situational awareness by higher jumper prior to lowering equipment.	

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ANALYSIS: 15

WHAT WAS THE MALFUNCTION?

This is not a malfunction it is an incident.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Lack of canopy control by higher jumper.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Situational awareness.

TAR&M/SA VOL II

I. GENERAL					
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT UH-60	5. ACFT SER NO.	
6. OPERATION/EXERCISE		7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 1500 feet AGL	10. ACFT SPEED (Knots) 70 Knots	11. DZ ELEVATION (Feet) 580	12. SURFACE WINDS (Knots) 5-8 Knots	13. VISIBILITY (Feet/Miles) 5 Miles	
II. PERSONNEL					
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT		15. EQUIPMENT WORN BY JUMPER Ballistic Helmet, MIRPS, MC1-1C		16. JUMPER'S POSITION IN ACFT Lift 5/4 jmp	
17. TYPE PARACHUTE (Specify) MC1-1C	18. TYPE MALFUNCTION				19. NO. JUMPS approx 30
	SEMI-INVERSION	INVERSION	CIGARETTE ROLL	OTHER (SPECIFY)	
	PILOT CHUTE	BLOWN SECTION	BROKEN SUSPENSION LINE	Partial malf, net lock	
20. TYPE OF RESERVE MIRPS	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31) <input type="checkbox"/> YES <input type="checkbox"/> NO		22. RESULTING INJURY None		

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

When the jumper exited the aircraft, his main canopy fully elongated resembling a streamer. It appeared that the anti-inversion net was locked together preventing the canopy from inflating. Once the jumper activated his reserve parachute (MIRPS) the main parachute (MC1-1C) started to flutter and then partially inflated. At this time the anti-inversion net seemed to be free of all restrictions. The jumper landed on the drop zone with a fully inflated reserve parachute and a partially inflated main parachute with no injuries. There was no debris found in the anti-inversion net, inside the canopy, or on the landing site.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

After completing a 100 percent TRI of the MC1-1C parachute there was no definite proof of what exactly caused the malfunction. There are two possible causes for the (net lock) type malfunction.
POSSIBLE CAUSE #1. There were excessive twist and curls in the lower portion of the anti-inversion net. When the parachute was placed into flat and long fold the twist and curls became inter-twined with other portions of the anti-inversion net. This parachute was used during an earlier water jump. The twist and curls may have formed during the drying process. Two other MC1-1C parachutes that were used on the water operation also had the same

CONTINUED ON NEXT PAGE

32. CAUSE OF MALFUNCTION/FAILURE (continued.)

twist and curls. This operation was the first time that these parachutes were used since the water jump. The parachutes used on the water jump were properly dried in accordance with TM 10-1670-292-23&P.

POSSIBLE CAUSE #2. There have been multiple repairs to the anti-inversion net between gores 19-23. Some of the stitching has unraveled measuring up to 2 inches in length. In the area where the manufacturer connected the two ends of the anti-inversion net there are free running ends of netting material measuring up to 3/4 inch. This material forms a V where the two ends are sewn together possibly catching on other portions of the anti-inversion net.

ANALYSIS: 16**WHAT WAS THE MALFUNCTION?**

Cigarette roll.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Inclusive.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Monitor entire life cycle of parachute from issue to repack.

TAR&M/SA VOL II

I. GENERAL					
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT CH-46	5. ACFT SER NO.	
6. OPERATION/EXERCISE		7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 1500	10. ACFT SPEED (Knots) 100	11. DZ ELEVATION (Feet) 0	12. SURFACE WINDS (Knots) 3-5	13. VISIBILITY (Feet/Miles) 1 Mile	
II. PERSONNEL					
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT		15. EQUIPMENT WORN BY JUMPER H-Harness		16. JUMPER'S POSITION IN ACFT 1/4	
17. TYPE PARACHUTE (Specify) MC1-1C	18. TYPE MALFUNCTION				19. NO. JUMPS 10
	SEMI-INVERSION	INVERSION	CIGARETTE ROLL	OTHER (SPECIFY)	
	PILOT CHUTE	BLOWN SECTION	BROKEN SUSPENSION LINE	Mid Air Collision	
20. TYPE OF RESERVE T10	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31) <input type="checkbox"/> YES <input type="checkbox"/> NO		22. RESULTING INJURY None		

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Number 4 jumper did not maintain proper interval during the exit of the CH-46 Sea Knight which upon the deployment of the number three jumper's parachute the number 4 jumper was already entangled with the third jumper. Both jumpers followed proper procedures with the "down and away" method of deployment and landed safely.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Jumper error.

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ANALYSIS: 17

WHAT WAS THE MALFUNCTION?

This is not a malfunction it is an incident.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Lack of canopy control by higher jumper.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Situational awareness.

TAR&M/SA VOL II

I. GENERAL					
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.	
6. OPERATION/EXERCISE		7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 1000 Feet AGL	10. ACFT SPEED (Knots) 125 KIAS	11. DZ ELEVATION (Feet) Unknown	12. SURFACE WINDS (Knots) 5 < 7	13. VISIBILITY (Feet/Miles) 15 Miles	
II. PERSONNEL					
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT		15. EQUIPMENT WORN BY JUMPER MC1-1C/Helmets/Utilities		16. JUMPER'S POSITION IN ACFT 1/1	
17. TYPE PARACHUTE (Specify) MC1-1C	18. TYPE MALFUNCTION				19. NO. JUMPS 95
	SEMI-INVERSION	INVERSION	CIGARETTE ROLL	OTHER (SPECIFY)	
	PILOT CHUTE	BLOWN SECTION	BROKEN SUSPENSION LINE	Holes larger than a helmet	
20. TYPE OF RESERVE T-10 Reserve	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31) <input type="checkbox"/> YES <input type="checkbox"/> NO		22. RESULTING INJURY Delayed Bac		

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)	
<p>While in his second point of performance, he noticed two holes in his canopy. The holes were located in gore 14 section 5 and gore 15 section 5. Both holes are located along the radial seam. The SNM did not activate his reserve parachute.</p>	
32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)	
<p>It is suspected that the holes were caused from a hard aggressive opening shock. The winds at higher altitudes were suspected to be gusting up to 20 knots along with the hot dry dense air could have been a factor.</p>	

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ANALYSIS: 18

WHAT WAS THE MALFUNCTION?

Holes.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Excessive airspeed of aircraft possible.
2. Possible deterioration of canopy.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Slow down aircraft.

TAR&M/SA VOL II

I. GENERAL					
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.	
6. OPERATION/EXERCISE		7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 2500	10. ACFT SPEED (Knots) 130	11. DZ ELEVATION (Feet) 1000	12. SURFACE WINDS (Knots) 10 Knots	13. VISIBILITY (Feet/Miles) 3 Miles	
II. PERSONNEL					
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT		15. EQUIPMENT WORN BY JUMPER MC1-1C/T-10R		16. JUMPER'S POSITION IN ACFT 4th	
17. TYPE PARACHUTE (Specify) MC1-1C	18. TYPE MALFUNCTION				19. NO. JUMPS 50
	SEMI-INVERSION	INVERSION	CIGARETTE ROLL	OTHER (SPECIFY)	
	PILOT CHUTE	BLOWN SECTION	BROKEN SUSPENSION LINE	Broken Control Lines	
20. TYPE OF RESERVE T-10R	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		22. RESULTING INJURY None		

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Jumper exited a C-130 aircraft tailgate. After opening shock, he checked his canopy to find numerous holes and 10 ripped out sections. Jumper deployed his reserve parachute and landed safely on the DZ. Jumper was not hurt.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

According to other jumpers that exited the aircraft, they complained of neck problems and the jumpmaster did not remember the aircraft slowing down on final approach. One jumper had his helmet blown off after exit. Cause of excessive damage to parachute was aircraft speed.

CONTINUED ON NEXT PAGE

ANALYSIS: 19

WHAT WAS THE MALFUNCTION?

Holes in canopy.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Excessive airspeed aircraft.
2. Unit performs salt water jumps - possible deterioration of canopy.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Slowdown aircraft (57-220).
2. Ensure proper cleaning procedures according to TM 10-1670-292.
3. Possible improper facilities for cleaning.
4. Recommend canopy inspection by engineer.

TAR&M/SA VOL II

I. GENERAL					
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.	
6. OPERATION/EXERCISE		7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 1000	10. ACFT SPEED (Knots) 130 Knots	11. DZ ELEVATION (Feet) 110 Feet	12. SURFACE WINDS (Knots) Calm	13. VISIBILITY (Feet/Miles) +7 Miles	
II. PERSONNEL					
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT		15. EQUIPMENT WORN BY JUMPER full combat equipment		16. JUMPER'S POSITION IN ACFT 1/last of 7	
17. TYPE PARACHUTE (Specify) MC1-1C main	18. TYPE MALFUNCTION				19. NO. JUMPS +100
	SEMI-INVERSION	INVERSION	CIGARETTE ROLL	OTHER (SPECIFY)	
	PILOT CHUTE	BLOWN SECTION	BROKEN SUSPENSION LINE	no opening shock	
20. TYPE OF RESERVE T-10 reserve	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31) <input type="checkbox"/> YES <input type="checkbox"/> NO		22. RESULTING INJURY None		

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Upon exit of the MC-130 off the ramp, it felt like the parachute did not deploy properly. I felt a large amount of pressure pulling my right arm up and back. At this time my body was in an altitude where I could not look up to see if my main had deployed. I did not feel any opening shock so I deployed my reserve. As my reserve deployed, I came upright and could see both my reserve and main inflating. The pressure remained on my arm until I hit the ground. All of my gear seemed to be disheveled and with my arm pinned back, I could not release my ruck. No injuries occurred from this mishap.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Delayed opening.

CONTINUED ON NEXT PAGE

ANALYSIS: 20

WHAT WAS THE MALFUNCTION?

Delayed opening.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Possible misrouted diagonal backstrap.
2. Possible bad exit.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Increase attention to proper rigging procedures and JMPL.
2. Ensure correct body position during pre-jump.

TAR&M/SA VOL II

I. GENERAL					
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.	
6. OPERATION/EXERCISE		7. DZ AND LOCATION		8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 800 feet AGL	10. ACFT SPEED (Knots) 130 Knots	11. DZ ELEVATION (Feet) 1446 Feet	12. SURFACE WINDS (Knots) 0	13. VISIBILITY (Feet/Miles) Limited	
II. PERSONNEL					
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT		15. EQUIPMENT WORN BY JUMPER Ruck, 60mm baseplate, bipod, M-4, LCE		16. JUMPER'S POSITION IN ACFT chalk 2 L-13	
17. TYPE PARACHUTE (Specify) T-10C	18. TYPE MALFUNCTION				19. NO. JUMPS 20
	SEMI-INVERSION	INVERSION	CIGARETTE ROLL	OTHER (SPECIFY)	
	PILOT CHUTE	BLOWN SECTION	BROKEN SUSPENSION LINE	Towed Jumper	
20. TYPE OF RESERVE T-10 Reserve	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31) <input type="checkbox"/> YES <input type="checkbox"/> NO		22. RESULTING INJURY back injury		

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Jumper exited the aircraft after standing up for 30-40 minutes with an 81 pound ruck w/ baseplate, 60mm bipod, and M-4 carbine. He was jumper 13 of 24 on the left door. Everyone exited normally except the last three jumpers because the third to the last jumper's ruck was caught on the seat while standing up. Red light, safety cleared to the rear twice and did not see the jumper, then the loadmaster cleared and did not see anything. They both tried to bring the static lines in by hand twice but could not so the loadmaster connected the TPRS on the static lines. Static lines were coming in normally, then the loadmaster saw a rucksack in front of the jumper platform and the static line in the corner of the lead edge of the door and immediately called TOWED JUMPER.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

The jumper's left leg strap was not connected due to improper rigging of his rucksack w/ baseplate and 60 mm bipod w/M-4 carbine. The jumper stated that he turned/spinned upon exit a half to a full turn counterclockwise and then realized that he was a towed jumper. He can only remember bouncing against the aircraft with his Kevlar and seeing the static lines above him. When the loadmaster and safety saw him at the jump platform they could only see a rucksack and his thigh area down. His head was with the direction of flight. The left door safety and both loads tried to pull the jumper in but could not. The primary jumpmaster, right door

CONTINUED ON NEXT PAGE

32. CAUSE OF MALFUNCTION/FAILURE (continued.)

door safety, and both loads pulled the jumper into the aircraft. They stated that the jumper's D-bag was over his left shoulder resting on his stomach and his rucksack was over his face, baseplate facing up like it is worn. The right door safety tried to remove the ruck but could not due to the static line holding it in place over his face, so he cut the static approximately six to seven inches from the D-bag under the sleeve (the sleeve was not cut). After he cut the static line, the rucksack was released. The only burn marks on the jumper's equipment were on the left side of the Reseve above the carrying handle. During the re-enactment, we noticed that because the jumper had been standing up for so long and the improper rigging of the weaons container the top knot had slipped over the top. We also noticed that a lot of stress was on the right leg strap grommet, which possibly released during the bouncing outside of the aircraft. The connector link ties were still tied when we secured the equipment. There were seven jumpers that exited after him and none of them said that they hit anything outside of the aircraft. Due to the safety cutting the static line, we can not be 100 percent sure of the cause but we conclude that he was towed due to poor exit and improper rigging of personal equipment i.e., rucksack w/baseplate, 60 mm bipod w/M-4 carbine. The jumper weighed 150 pounds and his total weight was 339.33.

ANALYSIS: 21**WHAT WAS THE MALFUNCTION?**

Towed parachutist.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Fatigue.
2. Far too much equipment.
3. Improper exit.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Ensure equipment is rigged properly.
2. Unhook and reseal jumpers whenever possible to reduce fatigue.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION		8. DATE AND TIME
9. ACFT ALTITUDE (Feet) 1154 MSL	10. ACFT SPEED (Knots) 130	11. DZ ELEVATION (Feet) 354	12. SURFACE WINDS (Knots) Calm	13. VISIBILITY (Feet/Miles) 20 Miles
II. PERSONNEL				
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT		15. EQUIPMENT WORN BY JUMPER Rucksack, AT4 weapon, jump pack		16. JUMPER'S POSITION IN ACFT 1st pass, 6th
17. TYPE PARACHUTE (Specify) T10C	18. TYPE MALFUNCTION			
	SEMI-INVERSION	INVERSION	CIGARETTE ROLL	OTHER (SPECIFY)
	PILOT CHUTE	BLOWN SECTION	BROKEN SUSPENSION LINE	Equip hung on flang
19. NO. JUMPS				
20. TYPE OF RESERVE MIRPS	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31) <input type="checkbox"/> YES <input type="checkbox"/> NO		22. RESULTING INJURY Shoulder	

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Jumper was sixth in a stick of nine jumpers to exit out the right paratroop door on the first pass. He was jumping with a rucksack/AT-4 weapon jump pack. Three jumpers exited prior to him with no problems. The loadmaster pointed to the jumpmaster to note a piece of equipment (AT-4 jumppack) resting on jump platform. The jumpmaster looked out the aircraft and noticed that the jumper was hung by AT-4 pack. Jumper was conscious and could make eye contact with jumpmaster and loadmaster. (Jumper still maintained control of his ripcord grip.) The safety and O/C decided to have loadmaster retrieve jumper due to the way his parachute was crooked and did not look right. Loadmaster installed TPRS and started retrieval. The static line was retrieving until the jumpmasters and hung jumpers parachutes got hung up in the pulley. The loadmaster loosened tension on the static line retriever and had the secondary loadmaster pull the parachutes through pulley. Then started the retrieval procedure again but the static line retriever would not pull the jumper inside the aircraft. At this time, the safety and jumpmaster had a hand grip on the jumper and started to pull the jumper into aircraft with the help of extra jumpmasters, safeties and loadmaster. Once jumper was inside aircraft he lost consciousness. A medic was on board and took over at that point by putting an oxygen mask on the jumper and he regained consciousness in approximately 15 seconds. Aircraft returned to base and jumper was transported to hospital. A pull test was accomplished on the right static line retriever and broke at 1340 pounds. The required range is 1500 to 1800 pounds.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Jumper's weapon pack was caught by the lower cross strap on a flang that extended out from the shell of the aircraft approximately 1 inch and 1 foot off the aircraft floor.

CONTINUED ON NEXT PAGE

ANALYSIS: 22

WHAT WAS THE MALFUNCTION?

It was an incident not a malfunction. Towed jumper.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Bracket
2. Improper exiting procedures (body position).

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Air Force has technical work order to remove bracket.
2. Reinforce mock door training specific w/AT-4 exit.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION		8. DATE AND TIME
9. ACFT ALTITUDE (Feet) 1250	10. ACFT SPEED (Knots) 130	11. DZ ELEVATION (Feet) Not Given	12. SURFACE WINDS (Knots) Calm	13. VISIBILITY (Feet/Miles) Unlimited
II. PERSONNEL				
14. NAME (Last, First, MI), GRADE, SSAN, & UNIT		15. EQUIPMENT WORN BY JUMPER		16. JUMPER'S POSITION IN ACFT
17. TYPE PARACHUTE (Specify) T10C	18. TYPE MALFUNCTION			19. NO. JUMPS 3
	SEMI-INVERSION	INVERSION	CIGARETTE ROLL	
	PILOT CHUTE	BLOWN SECTION	BROKEN SUSPENSION LINE	
20. TYPE OF RESERVE MIRPS	21. RESERVE FUNCTIONED PROPERLY (If "No" explain in item 31) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		22. RESULTING INJURY Neck Burn	
31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.) Broken suspension lines, front set of suspension liens broken causing the inability of the parachute to inflate after elongation.				
32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.) Weak exit, bad body position and possible poor static line control. Upon exit, the jumper felt the static line on his neck. Combination of the listed factors caused a hesitation in the deployment sequence adn a spinning motion. The jumper was spinning during the deployment phase causing the suspension lines to wrap around the bottom portion of the D-bag (approximately 3-5 stows deployed). The suspension lines rubbed together causing them to burn and break. Since the right front set of suspension lines were broken, caused the parachute not to inflate properly after elongation.				

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ANALYSIS: 23

WHAT WAS THE MALFUNCTION?

Broken suspension lines.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Misrouted static line.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Ensure safety makes thorough equipment checks.
2. Perform jumper static line checks.

CARGO MALFUNCTION REPORTS AND ANALYSES

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 2200 MSL	10. ACFT SPEED (Knots) 130	11. DZ ELEVATION (Feet) 365	12. SURFACE WINDS (Knots) 220/6	13. VISIBILITY (Feet/Miles) Not Given

III. CARGO				
23. TYPE LOAD AND WEIGHT A7A Ramp 280 LBS	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-500-3 TO 13C7-1-11	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain) High Velocity
		NO. PLATFORMS	NO. CONTAINERS 1	
26. TYPE PLATFORM/AIR-DROP CONTAINER A-7 Container	27. TYPE PARACHUTE AND NUMBER 15-Foot (1)	28. SIZE EXTRACTION/RELEASE PARACHUTE N/A	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT Aft Edge of Ramp
31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.) A-7 rigged IAW TO 13C-1-11. The gutted 550 cord of the breakaway static line broke before the 80 pound parachute securing line. The 15-foot parachute did not deploy. All equipment inside the container was destroyed.				
32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.) The load exited the aircraft and rolled foward 90 degrees forcing the weight of the load on the gutted 550 cord causing it to break before the parchute securing line.				

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ANALYSIS: 24

WHAT WAS THE MALFUNCTION?

The 15-foot parachute did not deploy.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

The gutted 550 cord tie broke prior to parachute deployment.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Evaluate breakaway static line doctrine for reliability.
2. Change gutted 550 tie for breakaway static lines.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 500	10. ACFT SPEED (Knots) 130	11. DZ ELEVATION (Feet) 19	12. SURFACE WINDS (Knots) 3-6 knots	13. VISIBILITY (Feet/Miles) 6 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT Barrel CDS/ A-22 sling 1000 LBS	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-500-3/ TO 13C7-1-11	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain) LVAD
		NO. PLATFORMS	NO. CONTAINERS 1	
26. TYPE PLATFORM/AIR-DROP CONTAINER Skid/A-22 Sling Load CDS	27. TYPE PARACHUTE AND NUMBER G-14 (2)	28. SIZE EXTRACTION/RELEASE PARACHUTE N/A	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT FS 497
31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.) The CDS was the 4th CDS in a mass airdrop non-CVR, 4 stick. All loads exited the plane. The right parachute on the 4th load deployed from the bag, but did not open. There was no indication of air getting into the channel. The left parachute on the load deployed and did not open. 14 of the 16 gores on the left riser group separated, leaving only two gores attached to the left riser and canopy. 6 of the 16 gores on the right riser group severed, leaving 10 gores attached to the riser and canopy. The spreader bar on the G-14 had a 1 inch tear in the middle of the bar. Lost the 4 plastic barrels. Lost one G-14.				
32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.) A couple of scenarios were derived, after further investigation and discussion. The most logical conclusion is the right parachute on the load deployed, but never opened. The channel was starved of air. The parachute on the left, therefore took on the full weight of the load (1000 pounds), causing the parachute to fall.				

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ANALYSIS: 25

WHAT WAS THE MALFUNCTION?

One G-14 parachute failed to deploy.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Improper packing of G-14.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Ensure that G-14 is packed in accordance with proper packing procedures.
2. Limit use of G-14s in mass CDS.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 650 AGL	10. ACFT SPEED (Knots) 130 KIAS	11. DZ ELEVATION (Feet) 550	12. SURFACE WINDS (Knots) 5 Knots	13. VISIBILITY (Feet/Miles) 7 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT CDS	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-500-3/ TO 13C7-1-11	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	<input checked="" type="checkbox"/> CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS	NO. CONTAINERS 1	
26. TYPE PLATFORM/AIR-DROP CONTAINER A-22	27. TYPE PARACHUTE AND NUMBER 26 Foot Ring Slot	28. SIZE EXTRACTION/RELEASE PARACHUTE NA	29. LENGTH OF REEFING LINE NA	30. POSITION OF LOAD IN AIRCRAFT FS 550
<p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>All drop sequences were normal. When the loadmasters started the clean up checklist it was noticed the CDS guillotine knife was missing. Upon investigation, the knife could not be located. The knife probably exited with the A-22 container. The quick disconnect was servicable. the retriever cable swedge ball was bent 90 degrees.</p>				
<p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>It is possible the knife came in contact with the container webbing and disconnected after cutting the gate. Another possibility is the knife cut the gate, recoiled into the aircraft ceiling and disconnected. This is the third related incident this year.</p>				

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ANALYSIS: 26

WHAT WAS THE MALFUNCTION?

CDS release gate knife separated from the quick disconnect.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Static line retriever cable quick disconnect; improperly seated; spring worn out; caught on container webbing; or disconnected after striking airplane during recoil.
2. Not enough information to fully evaluate malfunction.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Make inspection procedures for quick disconnect. Seat properly. Ensure the line of travel of quick disconnect can not be caught on anything.
2. Evaluate why knife would recoil.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 800 Feet AGL	10. ACFT SPEED (Knots) 120 Knots	11. DZ ELEVATION (Feet) 20 Feet	12. SURFACE WINDS (Knots) 6- 8 Knost	13. VISIBILITY (Feet/Miles) Unlimited

III. CARGO				
23. TYPE LOAD AND WEIGHT A-22/CDS 800 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-500-3/ TO 13C7-1-11	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS	NO. CONTAINERS 6	
26. TYPE PLATFORM/AIR-DROP CONTAINER A-22	27. TYPE PARACHUTE AND NUMBER G-12E (1)	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT
<p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>After the CDS exited the aircraft, the 68-inch pilot parachute failed to deploy. As a result, the G-12E did not deploy and the CDS impacted with the ground destroying the load. Upon investigation, it was found that the L-bar connector link that connects the 60-inch connector strap to the G-12 bridle loop was only connected to the bridle loop. The L-bar connector link was found on the bridle loop with the screws tight. The 60-inch connector strap was recovered from the aircraft from landing. It was undamaged.</p>				
<p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>The cause of the malfunction was the 60-inch connector strap not being connected to the G-12 bridle loop.</p>				

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ANALYSIS: 27

WHAT WAS THE MALFUNCTION?

After CDS exited the aircraft, the 68-inch pilot parachute failed to deploy.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

68-inch pilot parachute not properly rigged through the L-bar.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Rigging and inspection JAI.
2. Follow proper rigging and inspection of equipment.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 1100-1200	10. ACFT SPEED (Knots) 130 Knots	11. DZ ELEVATION (Feet) 700	12. SURFACE WINDS (Knots) Dead Calm	13. VISIBILITY (Feet/Miles) 15

III. CARGO				
23. TYPE LOAD AND WEIGHT CDS 750 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-500-3 TO 13C7-1-11	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS	NO. CONTAINERS 1	
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER G-12E (1)	28. SIZE EXTRACTION/RELEASE PARACHUTE Pilot Parachute	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT 2
31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.) Parachute did not inflate upon parachute deployment. CDS struck ground at a high velocity causing the load to bounce into the air about 8 feet and causing one of the water barrels to bust open, spilling out the water inside.				
32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.) Parachute riser lines were installed wrong on the connector links. Parachute was received new and had the 9-16 and 17-24 risers on the G-12 installed backwards causing the parachute risers to twist upon deployment thus robbing the parachute of any air.				

CONTINUED ON NEXT PAGE

ANALYSIS: 28

WHAT WAS THE MALFUNCTION?

Parachute did not inflate upon parachute deployment.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Suspension lines were improperly rigged on the connector links from the manufacturer.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Do proper in check and packing of parachute. If parachute is found to not meet the standard, submit Report of Deficiency and return for credit.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 700 AGL	10. ACFT SPEED (Knots) 130 KIAS	11. DZ ELEVATION (Feet) Unknown	12. SURFACE WINDS (Knots) 160@10 Knots	13. VISIBILITY (Feet/Miles) Unlimited

III. CARGO				
23. TYPE LOAD AND WEIGHT Hi-V CDS 1015/4060 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-500-3/ TO 13C7-1-11	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain) CVR
		NO. PLATFORMS	NO. CONTAINERS 4	
26. TYPE PLATFORM/AIR-DROP CONTAINER Hi-V CDS	27. TYPE PARACHUTE AND NUMBER 26 Ft Hi-V (1)	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT #3; #4
31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.) Possible turbulence behind the aircraft caused the bundles to roll into each other during the deployment phase.				
32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.) The last bundle of each stick in a four bundle mass CDS rolled into each other as the parachutes were deploying causing them to get tangled up together. The loads impacted the ground and all the water barrels were destroyed. There was no damage to the deployment bags and the parachutes had some broken suspension lines.				

CONTINUED ON NEXT PAGE

ANALYSIS: 29

WHAT WAS THE MALFUNCTION?

The last bundle of each stick in a four bundle mass CDS rolled into each other as the parachutes were deploying causing to tangle together.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

High velocity CDS is designed as a high altitude airdrop. Using this method at lower altitudes will increase the unreliability.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Examine high velocity use at low altitudes.
2. Do not use high velocity at low altitudes.
3. Airdrops should not be attempted in heavy turbulence.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 1000 Feet AGL	10. ACFT SPEED (Knots) 125 KIAS	11. DZ ELEVATION (Feet) Unknown	12. SURFACE WINDS (Knots) 5>9	13. VISIBILITY (Feet/Miles) 15 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT CDS w/26 Foot High Velocity 600 LBS	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-500-3/ TO 13C7-1-11	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS 1	NO. CONTAINERS 1	A22/CDS High Velocity
26. TYPE PLATFORM/AIR-DROP CONTAINER A22 CDS w/ Skid Board	27. TYPE PARACHUTE AND NUMBER 26 Foot High Velocity	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT Rear Load #1
31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.) Type 1, 1/4-Inch cotton webbing, used to tie the 26-foot high velocity to the CDS was found uncut and still attached to its appropriate tie down points.				
32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.) The type I, 1/4-inch cotton webbing along with the pack closing tie caused enough resistance to where the gutted 550 cord broke free from the aircraft prior to the canopy being deployed.				

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ANALYSIS: 30

WHAT WAS THE MALFUNCTION?

The parachute failed to deploy.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Gutted 550 cord broke prior to deploying parachute.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Examine breakaway static line theory.
2. Change breakaway static line doctrine to improve reliability.
3. Change the gutted 550 cord tie to improve reliability.
4. Follow QMC&S Oct 96 message change to FM 10-500-3/TO 13C7-1-11/
Marine FMFM 7-46 restricting high velocity breakaway static line to above
10,000 feet.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION		8. DATE AND TIME
9. ACFT ALTITUDE (Feet) 600 Feet	10. ACFT SPEED (Knots) 130 Knots	11. DZ ELEVATION (Feet) 3680 Feet	12. SURFACE WINDS (Knots) 2 Knots	13. VISIBILITY (Feet/Miles) Unlimited

III. CARGO				
23. TYPE LOAD AND WEIGHT CDS 750 LBS Rigged	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-500-3/ TO 13C7-1-11	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS	NO. CONTAINERS 1	
26. TYPE PLATFORM/AIR-DROP CONTAINER 48 Inch X 48 Inch	27. TYPE PARACHUTE AND NUMBER G-14 (2)	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT 1 of 1
<p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>When leaving the aircraft, one riser twisted and was drug across the cotter pin on the small clevis separating the riser from the load. The opposing parachute deployed normlly. The CDS landed with minimal damage under the remaining G-14.</p>				
<p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>After laying out the parachute, we concluded that when the parachute was rigged there was a twist in the riser. When dropped, the riser twisted and was drug across the cotter pin of the small clevis thus causing the riser to become severed.</p>				

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ANALYSIS: 31

WHAT WAS THE MALFUNCTION?

Improper deployment of recover parachute.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Improper packing procedures.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Pay more attention to details/rigging of parachutes.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT MC-130H	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION		8. DATE AND TIME
9. ACFT ALTITUDE (Feet) 300 Feet AGL	10. ACFT SPEED (Knots) 230 KCAS	11. DZ ELEVATION (Feet) 190 Feet	12. SURFACE WINDS (Knots) Calm	13. VISIBILITY (Feet/Miles) Unrestricted

III. CARGO				
23. TYPE LOAD AND WEIGHT Multiple HSSLADS (x2) 300 Lbs (ea)	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-542/ TO 13C7-51-21	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS	NO. CONTAINERS 2	SEDS
26. TYPE PLATFORM/AIR-DROP CONTAINER A-21	27. TYPE PARACHUTE AND NUMBER 22-Foot Ring Slot (1)	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT FS 727
<p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>Immediately after exiting the aircraft and the opening of the main cargo parachutes, the HSSLADS containers began to spin resulting in the suspension lines of both containers wrapping around each other. This resulted in decreasing canopy diameter and increased rate of fall. Both HSSLADS containers were destroyed upon impact.</p>				
<p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>The investigation team examined the destroyed HSSLADS containers, parachutes, and deployment bags, and the aircraft and found no abnormalities. The investigation team formalized the following theory regarding the malfunction. Approximately 2 years ago, TO 1C-130A-9 changed the position of the anchor cable stop for HSSLADS drops from FS 800 to FS 749. Obviously, this change results in the parachute(s) opening earlier than previously. When the anchor cable stop was installed at FS 800, multiple containers seemed to separate in the aircraft's slipstream prior to the parachute opening. Now that the anchor cable stop is installed at FS 749, the containers do not appear to be getting the same amount of separation before the parachutes open. We suspect that the force of the parachutes opening prior to the containers gaining adequate separation may cause the containers to pull apart from one another. This may be responsible for the containers spinning while they are still in close proximity of each other.</p>				

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ANALYSIS: 32

WHAT WAS THE MALFUNCTION?

Main parachute deployment interrupted.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Aircraft anchor cable stop position changed recently resulting in earlier deployment of parachutes.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

More study on the position of the anchor cable stops.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 600 AGL	10. ACFT SPEED (Knots) 130 KIAS	11. DZ ELEVATION (Feet) 770 MSL	12. SURFACE WINDS (Knots) 030/010	13. VISIBILITY (Feet/Miles) 10 SM

III. CARGO				
23. TYPE LOAD AND WEIGHT CDS 1205 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-512/ TO 13C7-1-8 Chapter 11	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS	NO. CONTAINERS 1	
26. TYPE PLATFORM/AIR-DROP CONTAINER	27. TYPE PARACHUTE AND NUMBER G-12E (1)	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT FS 570
31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.) CDS gate failed to cut. CDS malfunction checklist completed and load resecured. No damage incurred.				
32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.) Inspection centered on possible static line retriever problems. During preflight/JAI, the static line retriever functioned for 3 seconds as advertised. Post malfunction investigation revealed that in 2 out of 3 tests, the static line retriever hesitated during the 3 second rewind period. Suspect bad clutch settings. Turned over to maintenance for fixing.				

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ANALYSIS: 33

WHAT WAS THE MALFUNCTION?

CDS gate failed to cut.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Western gear static line retriever failed to function.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Indepth study of static line retriever problems.
2. Use static line retriever malfunction reporting guide to get all the information.
3. Design a better retriever winch.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 690	10. ACFT SPEED (Knots) 140 KIAS	11. DZ ELEVATION (Feet) 230 MSL	12. SURFACE WINDS (Knots) Calm	13. VISIBILITY (Feet/Miles) 5000+

III. CARGO				
23. TYPE LOAD AND WEIGHT CDS 800 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-500-3/ TO 13C7-1-11	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS	NO. CONTAINERS 1	
26. TYPE PLATFORM/AIR-DROP CONTAINER A-22	27. TYPE PARACHUTE AND NUMBER G-12E (1)	28. SIZE EXTRACTION/RELEASE PARACHUTE 68-Inch Pilot	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT FS 700/PS 737

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

At green light, the left retriever (Western Gear, serial #3081) ran for 3 seconds then shut off. The Type XXVI release gate failed to cut and the CDS failed to exit the aircraft. The 80 pound safety tie on the guillotine knife failed to break.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

Upon investigation, the malfunction was attributed to the Western Gear Retriever winch slip clutch. A full inspection of the winch was performed and found that the compression spring was fully seated in the retainer cup, the beaded chains were symmetrical (4 15/16") and passed a pull test. Additionally, maintenance performed and inspection on the winch found no discrepancies. The cause of the malfunction is thought to be the activation of the slip clutch at green light.

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ANALYSIS: 34

WHAT WAS THE MALFUNCTION?

Single CDS gate failed to cut.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Western gear static line retriever failed to operate correctly.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Continue to gather data on static line retrievers.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 690	10. ACFT SPEED (Knots) 140 KIAS	11. DZ ELEVATION (Feet) 230 MSL	12. SURFACE WINDS (Knots) Calm	13. VISIBILITY (Feet/Miles) 5000+

III. CARGO				
23. TYPE LOAD AND WEIGHT CDS 800 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-500-3/ TO 13C7-1-11	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS	NO. CONTAINERS 1	
26. TYPE PLATFORM/AIR-DROP CONTAINER A-22	27. TYPE PARACHUTE AND NUMBER G-12E (1)	28. SIZE EXTRACTION/RELEASE PARACHUTE 68 Inch Pilot	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT FS 700/PS 737
<p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>At green light, the left Western Gear Retriever (serial #3081) ran for 3 seconds then shut off. The Type XXVI release gate failed to cut and the CDS failed to exit the aircraft. The release knife safety tie also failed to break.</p>				
<p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>Upon investigation of the winch, the beaded chains were of the same length, and compression spring was seated in the retainer cup. A pull test of the winch was conducted and passed. Release gate had a little slack (could be manually pulled up 1-2 inches) but is not considered the cause. Release knife was brand new and SHARP. In a consensus of investigating authorities, the cause of the malfunction is thought to be the activation of the slip clutch when resistance is applied. Retriever passed pull test due to the fact that the slip clutch was reset prior to pull test.</p>				

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ANALYSIS: 35

WHAT WAS THE MALFUNCTION?

CDS gate failed to cut.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Western Gear Static Line Retriever failed to operate.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Continue to gather data.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 800 Feet	10. ACFT SPEED (Knots) 150 Knots	11. DZ ELEVATION (Feet) 750 Feet	12. SURFACE WINDS (Knots) Calm	13. VISIBILITY (Feet/Miles) Not Given

III. CARGO				
23. TYPE LOAD AND WEIGHT CDS Training Load 750 Lbs each	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-500-3/ TO 13C7-1-11	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS	NO. CONTAINERS	
		2	CVR	
26. TYPE PLATFORM/AIR-DROP CONTAINER CDS Training Load	27. TYPE PARACHUTE AND NUMBER G-14 (2)	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT Gate at FS 690
<p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>On a local tactical training mission, the aircraft was loaded and rigged for two CDS drops using CVR. The first drop was to be a double stack of two CDS training loads. The gate was rigged at FS 690 using pulley location at FS 617 and the right western gear retriever was utilized. The second drop was scheduled to be a mass CDS of eight CDS training loads with the gate rigged at FS 640, pulley location at FS 550 utilizing the left western gear static line retriever. Preflight checks of both static line retrievers were normal. Pre-slowdown checklists were accomplished without incident. At green light the right static line retriever winch ran momentarily, cut off, ran again briefly and then cut out. The gate never cut so the primary loadmaster called the malfunction and completion of drop checklists were accomplished IAW MCR 55-130. Post flight inspection revealed that the 80 pound cotton webbing safety ties on the Y-knives did not break. The static line retriever essentially drew the slack out of the cable and cut off.</p>				
<p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>Suspect the adjustment of the limit switch was too tight. Also on this winch the bottom of the track that the spring cup rides in was bent.</p>				

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ANALYSIS: 36

WHAT WAS THE MALFUNCTION?

CDS gate failed to cut.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Static line retriever ran intermittently.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Continue to gather data.
2. Rig limit switch to the most open setting.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 650 AGL	10. ACFT SPEED (Knots) 130 KIAS	11. DZ ELEVATION (Feet) 550	12. SURFACE WINDS (Knots) Calm	13. VISIBILITY (Feet/Miles) 7 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT CDS 2043 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-500-3/ TO 13C7-1-11	25. AERIAL DELIVERY SYSTEM USED		
		<input type="checkbox"/> DUAL RAIL	<input checked="" type="checkbox"/> CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS	NO. CONTAINERS 2	
26. TYPE PLATFORM/AIR-DROP CONTAINER A-22	27. TYPE PARACHUTE AND NUMBER 26-Foot Ring Slot (2)	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT FS 617
31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.) At the release point the green light switch was activated, the light flickered and did not illuminate. A "no drop" was called and an aircraft malfunction was declared. The static line retriever never activated. There was no damage to the aircraft or equipment.				
32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.) Investigation on the ground could not duplicate the failure of the green light to illuminate. Electric shop trouble shot the system and discovered loose wires on the resistor at FS 666. Could have been the cause during flight.				

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ANALYSIS: 37

WHAT WAS THE MALFUNCTION?

Aerial delivery system green light failed to operate.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Loose wire on the resistor.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Maintenance/Inspection of copilot switch red and green light.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 1173	10. ACFT SPEED (Knots) 130 KIAS	11. DZ ELEVATION (Feet) 1424 MSL	12. SURFACE WINDS (Knots) 6	13. VISIBILITY (Feet/Miles) 9 NM

III. CARGO				
23. TYPE LOAD AND WEIGHT CDS 800 LBS	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-500-3/ TO 13C7-1-11	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS	NO. CONTAINERS 1	
26. TYPE PLATFORM/AIR-DROP CONTAINER A-22	27. TYPE PARACHUTE AND NUMBER 26 Foot High Velocity	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT FS 575/PS 617
31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.) Loadmasters on the airplane stated that the right hand Western Gear Static Line Retriever winch rewound at green light for approximately 1 1/2 seconds. The 80 pound safety tie on the guillotine knife was broken, but the gate failed to cut. There was no damage to the bundle or the aircraft.				
32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.) Western Gear Static Line Retriever winch was preflighted properly, and the beaded chains were both 4 3/4 inches. The compression spring was also fully seated. The winch passed the pull test. Cause is undetermined.				

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ANALYSIS: 38

WHAT WAS THE MALFUNCTION?

CDS gate failed to cut.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Static line retriever failed to operate correctly.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Open the limit switch to the widest settings.
2. Continue to gather data.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 1200	10. ACFT SPEED (Knots) 130 KIAS	11. DZ ELEVATION (Feet) 1424 MSL	12. SURFACE WINDS (Knots) Calm	13. VISIBILITY (Feet/Miles) Unlimited

III. CARGO				
23. TYPE LOAD AND WEIGHT CDS 800 LBS	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-500-3/ TO 13C7-1-11	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain) High Velocity
		NO. PLATFORMS	NO. CONTAINERS 1	
26. TYPE PLATFORM/AIR-DROP CONTAINER A-22	27. TYPE PARACHUTE AND NUMBER 26 Foot High Velocity	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT FS 575/ PS 617

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

At green light the Western Gear Static Line Retriever Winch ran for approximately 3 seconds. Cable pulled tight but did not break the 80 pound safety tie on the guillotine knife. After emergency procedures were performed, the gate was cut due to either aircraft turbulence or movement. Beaded chains were both 4 7/8 inches.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

On the ground, the bundle was rigged with a new gate and when the CDS/LAPES switch was armed and the jump light switched to green the winch ran for approximately 1/2 second. The 80 pound tie was not cut. The compression spring was seated in the retainer cup and the rewind guide arm was at the bottom of its travel on the winch carriage causing an angle slightly upward and inboard towards the pulley station at FS 617. This caused the contact switch to engage. We suspect the possible cause is a misadjusted microswitch.

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ANALYSIS: 39

WHAT WAS THE MALFUNCTION?

CDS gate failed to cut.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Static line retriever failed to operate correctly.
2. Limit switch engaged.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Open limit switch.
2. Remove limit switch beaded chains.
3. Continue to gather data.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION		8. DATE AND TIME
9. ACFT ALTITUDE (Feet) 600 AGL	10. ACFT SPEED (Knots) 130 KIAS	11. DZ ELEVATION (Feet) 1424 MSL	12. SURFACE WINDS (Knots) 5	13. VISIBILITY (Feet/Miles) 9999 Feet

III. CARGO				
23. TYPE LOAD AND WEIGHT CDS (2) 1800 LBS	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-500-3/ TO 13C7-1-11	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS	NO. CONTAINERS 2	
26. TYPE PLATFORM/AIR-DROP CONTAINER A-22	27. TYPE PARACHUTE AND NUMBER 26-High Velocity	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT FS 555/PS 617

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

At green light, the right Western Gear Retriever ran for 1 second then shut off. During the pre-flight the winch and CDS system checked good. The Type XXVI release gate failed to cut and the CDS failed to exit the aircraft. The release knife safety tie also failed to break. Upon investigation of the retriever winch, the beaded chains were the same length. (4 7/8 inches), and the compression spring was seated in the retainer cup. A pull test was conducted and showed that the pull pressure was low (1000 foot pounds), the winch was readjusted. The pulley location was FS 617 and the gate location was FS 605. Spring condition good, limit switch screw was safety wired. Two routes were aborted due to the malfunction because the aircraft returned to base.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

The investigation team came to the conclusion that due to the carriage on the retriever being all the way at the bottom of the winch drum, the inboard upwards angle that was created with the pulley was sufficient enough to cause the contact switch to engage and cause the winch to cut off prematurely once resistance was applied by pulling on the 80 pound safety tie.

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ANALYSIS: 40

WHAT WAS THE MALFUNCTION?

CDS release gate failed to cut.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Static line retriever failed to operate.
2. Limit switch engaged.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Open limit switch to the maximum.
2. Remove limit switch and beaded chains.
3. Continue to gather data.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 650	10. ACFT SPEED (Knots) 130	11. DZ ELEVATION (Feet) 590	12. SURFACE WINDS (Knots) Calm	13. VISIBILITY (Feet/Miles) 7 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT CDS 3956 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-500-3/ TO 13C7-1-11	25. AERIAL DELIVERY SYSTEM USED		
		<input type="checkbox"/> DUAL RAIL	<input checked="" type="checkbox"/> CDS RELEASE GATE	OTHER (Explain) CVR
		NO. PLATFORMS	NO. CONTAINERS 4	
26. TYPE PLATFORM/AIR-DROP CONTAINER A-22	27. TYPE PARACHUTE AND NUMBER 26-Foot Ring Slot (4)	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT FS 550
31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.) At the NAVs "green light" call, the copilot activated the light from his panel. The red and green lights in front and all red and green lights in back went out. A malfunction was called and appropriate checklists were completed. The retriever was not activated and gate was not cut. No damage to load or aircraft.				
32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.) Maintenance found the copilots switch to be bad and R & R the switch.				

CONTINUED ON NEXT PAGE

ANALYSIS: 41

WHAT WAS THE MALFUNCTION?

Aerial delivery system green light failed.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Copilots aerial delivery light switch was bad.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Maintenance inspections.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 1125 AGL	10. ACFT SPEED (Knots) 130 KIAS	11. DZ ELEVATION (Feet) 1800 Feet	12. SURFACE WINDS (Knots) 220/10	13. VISIBILITY (Feet/Miles) 7+ Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT CDS 1060 LBS	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-500-3/ TO 13C7-1-11	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain) High Velocity
		NO. PLATFORMS	NO. CONTAINERS 1	
26. TYPE PLATFORM/AIR-DROP CONTAINER High Velocity CDS	27. TYPE PARACHUTE AND NUMBER 26-Foot High Velocity (1)	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT FS 700
31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.) Green light failed to illuminate, static line retriever failed to operate.				
32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.) Troop jump light circuit breaker tripped.				

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ANALYSIS: 42

WHAT WAS THE MALFUNCTION?

Aerial delivery system lights failed to operate.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Aerial delivery system lights circuit breaker tripped causing the lights not to illuminate

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Maintenance inspection.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION		8. DATE AND TIME
9. ACFT ALTITUDE (Feet) 650	10. ACFT SPEED (Knots) 140	11. DZ ELEVATION (Feet) 472	12. SURFACE WINDS (Knots) Calm	13. VISIBILITY (Feet/Miles) 7 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT CDS 2024 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-500-3/ TO 13C7-1-11	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	<input checked="" type="checkbox"/> CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS	NO. CONTAINERS 2	
26. TYPE PLATFORM/AIR-DROP CONTAINER A-22	27. TYPE PARACHUTE AND NUMBER 26-Foot Ring Slot (2)	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT FS 737
31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.) At green light, the retriever activated, ran for approximately 2 seconds and shut off. The gate failed to cut and the malfunction checklist was accomplished.				
32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.) This was a left hand, western gear retriever winch. Pull test had been C/W, cup was seated, beaded chains were IAW and microswitches were installed and rigged properly. Two non-CVR bundles were rigged using pulley station 737. Electric shop found a loose connection on the copilots drop panel. They explained that the green light switch is a multicontact switch. One contact powers the lights and the other powers the timer on the winch. The loose wire was on the timer contact. Suspected cause of the malfunction is lost contact in the switch thus turning off the winch while the green light was still on. The contact was tightened and the winch operated properly. Impact to the mission was a canx airdrop.				

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ANALYSIS: 43

WHAT WAS THE MALFUNCTION?

CDS gate failed to cut.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Aerial delivery system light switch loose wire.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Preventive maintenance.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 650 A	10. ACFT SPEED (Knots) 130 KIAS	11. DZ ELEVATION (Feet) 1424	12. SURFACE WINDS (Knots) 240 @10	13. VISIBILITY (Feet/Miles) 10 NM

III. CARGO				
23. TYPE LOAD AND WEIGHT CDS x 2 800 LBS (each)	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-500-3/ TO 13C7-1-11	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain) Non-CVR
		NO. PLATFORMS	NO. CONTAINERS 2	
26. TYPE PLATFORM/AIR-DROP CONTAINER A-22 CDS	27. TYPE PARACHUTE AND NUMBER 26-Foot High Velocity (1 each)	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT FS 677
31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.) At green light, the left western gear retriever winch rewound and the gate failed to gate. Winch was noted to be intermittent by the loadmaster during green light. 1 - spring was in good condition. 2 - cup was seated. 3 - limit switch was not fully engaged. 4 - limit switch screw was safetied. 5 - winch ran intermittently. 6 - 80-pound did not break. 7 - knife did not get snagged on anything. 8 - knife was sharp. 9 - pulley was @ 737. 10 - gate was @ 727. 11 - non CVR. 12 - turbulence was encountered during the drop. 13 - awaiting maintenance pull test and check out IAW job guides and the date that the retriever was last inspected.				
32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.) Malfunction was attributed to the slip clutch inadvertently engaging. Malfunction caused the loss of currency and training; NAV lead upgrade, two awards routes, and two CDS drops.				

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ANALYSIS: 44

WHAT WAS THE MALFUNCTION?

CDS gate failed to cut.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Static line retriever failed to operate.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Inspect and replace western gear.
2. Continue to gather data.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 1179	10. ACFT SPEED (Knots) 130 KIAS	11. DZ ELEVATION (Feet) 1424	12. SURFACE WINDS (Knots) 4	13. VISIBILITY (Feet/Miles) Unlimited

III. CARGO				
23. TYPE LOAD AND WEIGHT A-22 800 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-500-3/ TO 13C7-1-11	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain) High Velocity
		NO. PLATFORMS	NO. CONTAINERS 1	
26. TYPE PLATFORM/AIR-DROP CONTAINER A-22	27. TYPE PARACHUTE AND NUMBER 26-Foot High Velocity (1)	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT GL 720/PS 737
<p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>At green light, the static line retriever winch (right side) ran for approximately 3 seconds, but failed to cut the release gate. The 80 pound safety tie was broken, the gate was pulled up 6 inches and was laying horizontal inside the knife. The load was not crushed in any way and knife was sharp. The knife was not caught on anything. Beaded chains were of same length, compression spring was seated. The limit switch screw was safety wired. There was no turbulence encountered. The JAI inspector and crew stated that there was slightly more than 2 inches of slack in the retriever cable and that the gate was tight during the after loading inspection.</p>				
<p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>At the time of drop, the gate folded inside the knife to lay flat possibly due to the gate being loose at the time of the drop. The winch pull test found no discrepancies (1500 pounds). Believe the crew failed to insure the gate was tight prior to the drop. Possibly a link in the chain gate was twisted or sideways and became loose during takeoff-roll. Believe the cause of malfunction was "crew error".</p>				

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ANALYSIS: 45

WHAT WAS THE MALFUNCTION?

CDS gate failed to cut.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Crew improper rigging procedures.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Pay better attention to rigging.
2. Pay more attention to detail during JAI.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT MC-130E	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 400 AGL	10. ACFT SPEED (Knots) 130	11. DZ ELEVATION (Feet) 110	12. SURFACE WINDS (Knots) 350/08	13. VISIBILITY (Feet/Miles) 7 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT CDS 1080 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-500-2/ TO 13C7-1-5 FM 10-512/ TO 13C7-1-8	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS	NO. CONTAINERS 1	
26. TYPE PLATFORM/AIR-DROP CONTAINER A-22	27. TYPE PARACHUTE AND NUMBER G-12D (1)	28. SIZE EXTRACTION/RELEASE PARACHUTE	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT FS 530
<p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>At green light, static line retriever was activated, stack removed from cable. System ran for approximately three seconds, gate failed to cut, 80 pound tie securing the knife to the release gate failed to break.</p>				
<p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>Static line retriever (western gear) failed to produce enough pull to break the 80 pound tie on the release gate.</p>				

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ANALYSIS: 46

WHAT WAS THE MALFUNCTION?

CDS gate failed to cut.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Western gear. Static line retriever failed to operate correctly.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Inspect/Replace/Gather data.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION		8. DATE AND TIME
9. ACFT ALTITUDE (Feet) 1200 M	10. ACFT SPEED (Knots) 140 K	11. DZ ELEVATION (Feet) 200 Feet	12. SURFACE WINDS (Knots) 220 @ 6	13. VISIBILITY (Feet/Miles) Unrestricted

III. CARGO				
23. TYPE LOAD AND WEIGHT 8 Foot Type V Platform 3140 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-512/ TO 13C7-1-8	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS 1	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER Type V	27. TYPE PARACHUTE AND NUMBER G-11B.(1)	28. SIZE EXTRACTION/RELEASE PARACHUTE 15-Foot Ring Slot	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT CG 590
<p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>Load failed to extract with parachute deployed outside aircraft. Loadmaster used the right hand crossover to release platform. Lock #9 was set at 2.5</p>				
<p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>This lock was received from depot and a calibration test was accomplished. Lock tested good and was installed in aircraft. A calibration test was accomplished on lock and released at 52%. (Window 48-64%) pull test was on lock #9.</p>				

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ANALYSIS: 47

WHAT WAS THE MALFUNCTION?

Load failed to extract with extraction parachute fully deployed outside aircraft. Loadmaster used the right-hand crossover to release platform. Filed for tracking purposes.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Right hand lock failure. #9 lock released at 52%. Loadmaster may have pulled the handle early.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Perform periodic maintenance inspection on latches.
2. Train loadmasters to let the system work.
3. Pay more attention to detail during preflight.
4. Use other locks.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION		8. DATE AND TIME
9. ACFT ALTITUDE (Feet) 650	10. ACFT SPEED (Knots) 140	11. DZ ELEVATION (Feet) 372	12. SURFACE WINDS (Knots) Calm	13. VISIBILITY (Feet/Miles) 7 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT HE/Mass 2862 LBS	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-512/ TO 13C7-1-8	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS 1	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER Type V	27. TYPE PARACHUTE AND NUMBER G-12E (2)	28. SIZE EXTRACTION/RELEASE PARACHUTE 15-Foot Ring Slot	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT Lock #9
31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.) Right hand cross over pulled. Extraction parachute good. Fully inflated.				
32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.) Right hand lock #9 pressure checked, failed check. Lock removed and replaced.				

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ANALYSIS: 48

WHAT WAS THE MALFUNCTION?

1. Load failed to extract with extraction parachute fully deployed.
2. Right hand crossover used to release load.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Lock failed hatch test.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Perform periodic maintenance inspection and testing.
2. Pay more attention to detail during preflight.
3. Use other locks.
4. Teach loadmasters to let the system work.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C 141	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 810 AGL	10. ACFT SPEED (Knots) 150 KCAS	11. DZ ELEVATION (Feet) 190 MSL	12. SURFACE WINDS (Knots) Calm	13. VISIBILITY (Feet/Miles) 7 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT Type V 8-Foot 2980 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-500-2/ TO 13C-1-5	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain) EFTC
		NO. PLATFORMS 1	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER Type V	27. TYPE PARACHUTE AND NUMBER G-12E (2)	28. SIZE EXTRACTION/RELEASE PARACHUTE 15-Foot	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT 1 of 1/ FS 1180
<p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>Platform failed to extract after extraction parachute was deployed. Right rail remote control handle was used and platform exited the aircraft. Lock #22 was set at 2.20. I observed parachute release rack release the extraction parachute electrically at the green light.</p>				
<p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>Rail section was removed and "bench checked" at dash 21/rail shop. No mechanical defects were identified.</p>				

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ANALYSIS: 49

WHAT WAS THE MALFUNCTION?

1. Platform failed to extract after extraction parachute was fully deployed.
2. Right hand crossover used to release load.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. No apparant failure of lock #22.
2. Loadmaster may have actuated the right rail control handle early.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Make loadmasters aware to let the system work.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 1200 MSL	10. ACFT SPEED (Knots) 140 KIAS	11. DZ ELEVATION (Feet) 550	12. SURFACE WINDS (Knots) 6 Knots	13. VISIBILITY (Feet/Miles) 5 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT Heavy Equipment 2608 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-512/ TO 13C7-1-8	25. AERIAL DELIVERY SYSTEM USED		
		<input checked="" type="checkbox"/> DUAL RAIL	<input type="checkbox"/> CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS 1	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER Type V	27. TYPE PARACHUTE AND NUMBER G-12E (2)	28. SIZE EXTRACTION/RELEASE PARACHUTE 15-Foot Ring Slot	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT FS 625
<p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>At green light, the extraction parachute deployed and overcame the force of the right hand lock. At this point, according to aircrew and DZ statements, the extraction parachute collapsed. The load rolled slowly out of the aircraft, the recovery parachutes started to deploy, but due to the slow extraction, the load tumbled upside down into the recovery parachutes. The recovery parachutes then released from the load and the load fell to the ground. The load was destroyed.</p>				
<p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>Investigation revealed the 15-foot extraction parachute suspension lines 1 through 9 and 15 and 16) failed at the L-bar connector link end, approximately 3 inches aft of the suspension line stitching point. This parachute was put in service in Mar 93 and had 36 RECORDED drops. Suspect material failure due to excessive use. This is inherent with unilateral training.</p>				

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ANALYSIS: 50

WHAT WAS THE MALFUNCTION?

The extraction parachute deployed and overcame the force of the right hand lock and collapsed

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Improper packing procedures.
2. Unit was using the wrong retainer bands. This caused the suspension line to prematurely deploy during the deployment phase allowing them to interfere with the canopy and other suspension lines. Suspension lines also have the possibility of falling free of the stow panel when closing the bag.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Follow TM procedures for recovery and packing. Riggers should ensure they are using the proper packing supplies that are identified in the manuals.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 1000 AGL	10. ACFT SPEED (Knots) 140	11. DZ ELEVATION (Feet) 950 Feet	12. SURFACE WINDS (Knots) Calm	13. VISIBILITY (Feet/Miles) 10

III. CARGO				
23. TYPE LOAD AND WEIGHT Training Load 3680 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-500-2/ TO 13C7-1-5	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS 1	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER Type V	27. TYPE PARACHUTE AND NUMBER G-12E (2)	28. SIZE EXTRACTION/RELEASE PARACHUTE 15-Foot Ring Slot	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT 1

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Rigging, loading, and JAI were without incident. The extraction phase was normal. The deployment phase did not initiate. The platform descended by extraction parachute only. The DZ team confirmed that the platform impacted the ground on the latch assembly. The load was destroyed on impact. Upon initial drop zone inspection, the actuator arm did rotate completely. The link assembly was in the open position with the three-point link still attached to the latch assembly. Upon rotating the three-point link on the ground, the three-point link disengaged from the latch assembly. The three-point link was not over tightened, providing free movement of the cam. Due to the impact with the ground, the cable was kinked at about 75 degrees, 6 inches from the latch assembly. The adapter links were slanted at a 45-degree angle. The following was noted in testing the EFTC at the aerial port. We could not duplicate the incident. We straightened out the cable and tried to rearm the latch assembly with the actuator arm. We met resistance and the latch would not move. We replaced only the cable and the EFTC system worked properly. The incident cable showed no visible signs of bird caging or kinking on the outer casing, other than already mentioned from ground impact. The incident cable would not move freely. The cable was cut in half, and the inner cable removed. Upon inspection of the inner cable, it was found to be severely birdcaged, about 2 inches from the actuator attachment point. The rest of the inner cable showed no other signs of damage other than the severe kink near the latch assembly from ground impact.

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32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

It is suspected that the severe birdcaging of the inner cable did not allow the latch to release during the deployment phase. The ground impact possibly caused the latch to open.

ANALYSIS: 51

WHAT WAS THE MALFUNCTION?

1. EFTC failed to transfer from extraction to deployment.
2. Deployment sequence never started.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Failed to inspect the EFTC properly during the rigging phase.
2. Failed to perform a function check IAW USAQMC&S ADFSD May 96 message.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Perform function checks IAW USAQMC&S ADFSD May 96 message.
2. Performing function checks on EFTC systems will prevent this from reoccurring.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 650	10. ACFT SPEED (Knots) 140	11. DZ ELEVATION (Feet) 472	12. SURFACE WINDS (Knots) Calm	13. VISIBILITY (Feet/Miles) 7 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT HE/Mass 2638 LBS	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-512/ TO 13C7-1-8	25. AERIAL DELIVERY SYSTEM USED		
		<input checked="" type="checkbox"/> DUAL RAIL	<input type="checkbox"/> CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS 1	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER Type V	27. TYPE PARACHUTE AND NUMBER G-12E (2)	28. SIZE EXTRACTION/RELEASE PARACHUTE 15-Foot Ring Slot	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT Lock #9
<p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>Extraction parachute failed during extraction phase. Parachute collapsed after overcoming the right hand lock, resulting in a slow extraction. Deployment phase was initiated, the load tumbled into the recovery parachutes. One partially inflated, the other remained in the bag. The load was destroyed.</p>				
<p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>The extraction parachute had broken lines (1 through 10 and 15 and 16) aft of the connector link. Line #7 was also broken at the canopy approximately 10 inches forward of the skirt and that portion of line was not recovered. Line #7 had been replaced and line 8 had a section spliced approximately 12 inches aft of the connector link. TO 13C5-26-2 has no provisions for splicing lines on 15-foot extraction parachutes. Line #7 was not replaced IAW TO 13C5-26-2 pages 2-82 through 2-85. The stitching at the connector link had sewing approximately 6-8 inches. The TO reads 3 inches of stitching, The excess stitching was into the line aft of the point where the tapered end of the line inside the cord had stopped, going into the single line. This stitching would weaken/damage the line. We think Line #8 broke first, followed by Line #7. Thus overloading the remaining lines and the parachute failed. This parachute had 50 recorded extractions. Date of manufacture Jan 84 and put into service Jun 96.</p>				

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ANALYSIS: 52

WHAT WAS THE MALFUNCTION?

After load started extraction, the extraction parachute failed.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Improper maintenance and packing procedures.
2. Unit used incorrect retainer bands.
3. Improper splicing procedures.
4. Exceedingly high number of extractions and repairs due to extensive use.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Following the guidelines set forth in TOs and TMs will prevent this from happening.
2. Pay more attention to detail while packing.
3. Look for cumulative repairs and damage after exceeding high numbers of drops.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 2550 MSL	10. ACFT SPEED (Knots) 140 KIAS	11. DZ ELEVATION (Feet) 1800 MSL	12. SURFACE WINDS (Knots) 190 at 8	13. VISIBILITY (Feet/Miles) Unlimited

III. CARGO				
23. TYPE LOAD AND WEIGHT Heavy Equipment 2950 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-512/ TO 13C7-1-8	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS 1	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER 8-Foot Type V	27. TYPE PARACHUTE AND NUMBER G-12E	28. SIZE EXTRACTION/RELEASE PARACHUTE 15-Foot Cargo Type	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT CG at FS 500
<p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>One of two G-12E recovery parachutes did not inflate. Extraction was normal. Malfunction parachute never inflated. Inspection on the ground found that the ticket No. 3 ties did not break on the suspension lines including the first tie 5 feet down from the canopy. There were also three to four suspension lines wrapped around the canopy not allowing the canopy to inflate. The platform landed on the LZ parallel taxiway and caused minor damage to the taxiway surface.</p>				
<p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>I feel this malfunction may have been caused during the packing of the parachute when the first five feet of suspension lines are stuffed into the bag. When the parachutes deployed, the suspension lines that were wrapped around the canopy prevented the parachute from inflating. It may also be possible that the excess space in the new deployment bags may have allowed the suspension lines to fall further into the bags than normal and wrap itself around the canopy.</p>				

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ANALYSIS: 53

WHAT WAS THE MALFUNCTION?

G-12 parachute never properly deployed.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Improper packing procedures specifically stowing of canopy and lines.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Ensure proper packing procedures are followed.
2. Pay closer attention to detail while packing.
3. Institute a packing quality control process.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 650 AGL	10. ACFT SPEED (Knots) 140 KIAS	11. DZ ELEVATION (Feet) 472	12. SURFACE WINDS (Knots) Calm	13. VISIBILITY (Feet/Miles) 7 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT HE Mass 2586 LBS	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-512/ TO 13C7-1-8	25. AERIAL DELIVERY SYSTEM USED		
		<input checked="" type="checkbox"/> DUAL RAIL	<input type="checkbox"/> CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS 1	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER TYPE V	27. TYPE PARACHUTE AND NUMBER G-12E (2)	28. SIZE EXTRACTION/RELEASE PARACHUTE 15-Foot Ring Slot	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT Lock #5
<p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>At green light, the extraction parachute deployed, overcame the right hand lock, then collapsed. The load slowly rolled out of the aircraft. The load tumbled, recovery parachutes deployed, and the load was undamaged. This was the #2 platform in a seq airdrop,.</p>				
<p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>Investigation revealed the 15-foot extractoin had lines 1 and 2 and 1 through 16 broken aft of the connector link, approximately 3 inches aft of the stitching point. The extraction parachute was manufactured 11-91, put in service 6-97 and had 35 drops. Suspected cause is material failure.</p>				

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ANALYSIS: 54

WHAT WAS THE MALFUNCTION?

Extraction parachute failed during extraction after overcoming the lock.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Improper packing procedures.
2. Improper retainer bands used.
3. Improper maintenance and overuse.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Follow proper packing procedures IAW TM/TO.
2. Use proper materials for packing.
3. Pay more attention to detail.
4. Institute a parachute packing quality control process.
5. Identify the number of repairs to limit use.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 650 AGL	10. ACFT SPEED (Knots) 140	11. DZ ELEVATION (Feet) 472	12. SURFACE WINDS (Knots) Calm	13. VISIBILITY (Feet/Miles) 7 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT HE Mass 2690 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-512/ TO 13C7-1-8	25. AERIAL DELIVERY SYSTEM USED		
		<input checked="" type="checkbox"/> DUAL RAIL	<input type="checkbox"/> CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS 1	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER Type V	27. TYPE PARACHUTE AND NUMBER G-12E (2)	28. SIZE EXTRACTION/RELEASE PARACHUTE 15-Foot Ring Slot	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT Lock #9
31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.) Extraction phase was normal. During the deployment of the G-12E cargo parachutes, DZ personnel reported one of the canopies deployed slowly and appeared to be air starved by the other canopy. The air starved canopy started to deploy below the already inflated canopy, but impacted the DZ prior to fully inflating. The load and parachutes were not damaged.				
32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.) Suspect air starvation.				

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ANALYSIS: 55

WHAT WAS THE MALFUNCTION?

One G-12E failed to properly deploy.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Parachutes were not transported correctly, i.e., field packed, exposing it to unknown/unseen damage.
2. Parachutes were not aired or shook IAW TM/TO to allow for breathing or removal of foreign objects/debris.
3. Parachutes might not have been inspected correctly nor fanned properly.
4. Parachute packing/supervision is suspect due to heavy workload and inexperienced personnel.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Follow all the proper parachute packing and care procedures.
2. Ensure manning is appropriate for workload and try and maintain some continuity.
3. Ensure facilities are maintained and have the correct equipment and space to do the mission.
4. Institute a parachute or shop quality control process.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 650 AGL	10. ACFT SPEED (Knots) 140	11. DZ ELEVATION (Feet) 472	12. SURFACE WINDS (Knots) Calm	13. VISIBILITY (Feet/Miles) Unlimited

III. CARGO				
23. TYPE LOAD AND WEIGHT HE Mass 2580 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-512/ TO 13C7-1-8	25. AERIAL DELIVERY SYSTEM USED		
		<input checked="" type="checkbox"/> DUAL RAIL	<input type="checkbox"/> CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS 1	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER Type V	27. TYPE PARACHUTE AND NUMBER G-12E (2)	28. SIZE EXTRACTION/RELEASE PARACHUTE 15-Foot Ring Slot	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT Lock #10
<p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>Extraction phase was normal. During the deployment of the G-12E cargo parachutes, DZ personnel reported one of the canopies appeared to have several lines over the canopy. The canopy deployed in what was described as a clover shape. The load and parachutes were not damaged.</p>				
<p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>Unknown.</p>				

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ANALYSIS: 56

WHAT WAS THE MALFUNCTION?

Parachute did not deploy correctly.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Parachutes were not transported correctly, i.e., field packed, exposing it to unknown/unseen damage.
2. Parachutes were not aired or shook IAW TM/TO to allow for breathing or removal of foreign objects/debris.
3. Parachutes might not have been inspected correctly nor fanned properly.
4. Parachute packing/supervision is suspect due to heavy workload and inexperienced personnel.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Follow all the proper parachute packing and care procedures.
2. Ensure manning is appropriate for workload and try and maintain some continuity.
3. Ensure facilities are maintained and have the correct equipment and space to do the mission.
4. Institute a parachute or shop quality control process.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 650 AGL	10. ACFT SPEED (Knots) 140	11. DZ ELEVATION (Feet) 472	12. SURFACE WINDS (Knots) Calm	13. VISIBILITY (Feet/Miles) 7 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT HE Mass 2620 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-512/ TO 13C7-1-8	25. AERIAL DELIVERY SYSTEM USED		
		<input checked="" type="checkbox"/> DUAL RAIL	<input type="checkbox"/> CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS 1	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER Type V	27. TYPE PARACHUTE AND NUMBER G-12E (2)	28. SIZE EXTRACTION/RELEASE PARACHUTE 15-Foot Ring Slot	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT Lock #9
<p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>Extraction parachute fully deployed overcame the right hand lock. The extraction parachute then collapsed during the extraction . Deployment phase was normal. The load and recovery parachutes were undamaged. The extraction parachute was destroyed.</p>				
<p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>Investigation revealed the 15-foot extraction parachute had lines 1 through 3 and 12 through 16 broken. Line 16 was broken 48 inches aft of the connector link. Line 15 was broken 15 inches aft of the connector link. The remaining lines were broken approximately 3 inches aft of the connector link stitching point. None of the lines had evidence of being cut. The loadmaster reported that the extraction parachute deployed normally, then dropped out of his sight and was unaware that it had failed saying the extraction was normal. This parachute had 35 re-corded extractions. Manufacture date 11-91. Material failure due to extensive use.</p>				

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ANALYSIS: 57

WHAT WAS THE MALFUNCTION?

Extraction parachute failed during or after extraction.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Improper packing.
2. Improper retainer bands used and possible overuse.
3. Use of wrong materials over time damages suspension lines.
4. Suspension lines may have knotted due to line dumping and broke.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Follow proper pack procedures.
2. Ensure proper supplies are used (retainer bands).

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 650	10. ACFT SPEED (Knots) 140	11. DZ ELEVATION (Feet) 472	12. SURFACE WINDS (Knots) Calm	13. VISIBILITY (Feet/Miles) 7 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT HE Mass 2682 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-512/ TO 13C7-1-8	25. AERIAL DELIVERY SYSTEM USED		
		<input checked="" type="checkbox"/> DUAL RAIL	<input type="checkbox"/> CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER Type V	27. TYPE PARACHUTE AND NUMBER G-12E (2)	28. SIZE EXTRACTION/RELEASE PARACHUTE 15-Foot Ring Slot	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT Lock #10
31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.) Right hand cross over pulled. Extraction parachute good, fully inflated. Lock #10 set @ 2.5. No damage incurred.				
32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.) Lock pressure checked, failed check. Lock removed and replaced.				

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ANALYSIS: 58

WHAT WAS THE MALFUNCTION?

Load failed to extract with a good extraction parachute.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Right hand lock failed pressure test.
2. Equipment failure.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Loadmaster should allow enough time for the extraction parachute to perform.
2. Perform periodic maintenance inspections.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 650	10. ACFT SPEED (Knots) 140	11. DZ ELEVATION (Feet) 590	12. SURFACE WINDS (Knots) 5 Knots	13. VISIBILITY (Feet/Miles) 7 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT HE Mass 2694 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-512/ TO 13C7-1-8	25. AERIAL DELIVERY SYSTEM USED		
		<input checked="" type="checkbox"/> DUAL RAIL	<input type="checkbox"/> CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS 1	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER Type V	27. TYPE PARACHUTE AND NUMBER G-12E (2)	28. SIZE EXTRACTION/RELEASE PARACHUTE 15-Foot Ring Slot	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT Lock #3
31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.) Extraction phase was normal. During deployment only one G-12E inflated. The load came down under the good parachute and was undamaged.				
32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.) DZ personnel reported that the malfunctioning parachute appeared to be tangled with the good parachute. Upon investigation, the malfunction parachute was tangled in the suspension lines of the good parachute preventing an air channel and parachute inflation.				

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ANALYSIS: 59

WHAT WAS THE MALFUNCTION?

Parachutes had a midair entanglement and one failed to deploy.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Parachutes were not transported correctly, i.e., field packed, exposing it to unknown/unseen damage.
2. Parachutes were not aired or shook IAW TM/TO to allow for breathing or removal of foreign objects/debris.
3. Parachutes might not have been inspected correctly nor fanned properly.
4. Parachute packing/supervision is suspect due to heavy workload and inexperienced personnel.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Follow all the proper parachute packing and care procedures.
2. Ensure manning is appropriate for workload and try and maintain some continuity.
3. Ensure facilities are maintained and have the correct equipment and space to do the mission.
4. Institute a parachute or shop quality control process.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 650	10. ACFT SPEED (Knots) 140	11. DZ ELEVATION (Feet) 472	12. SURFACE WINDS (Knots) Calm	13. VISIBILITY (Feet/Miles) 7 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT HE/Mass 2726 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-512/ TO 13C7-1-8	25. AERIAL DELIVERY SYSTEM USED		
		<input checked="" type="checkbox"/> DUAL RAIL	<input type="checkbox"/> CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS 1	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER Type V	27. TYPE PARACHUTE AND NUMBER G-12E (2)	28. SIZE EXTRACTION/RELEASE PARACHUTE 15-Foot Ring Slot	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT Lock #9
31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.) Right hand emergency handle pulled. Extraction parachute good, fully inflated.				
32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.) Right hand lock #9 was pressure checked. Check was good. Dash 21 found nothing wrong with the lock and cleared the write up in the 781.				

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ANALYSIS: 60

WHAT WAS THE MALFUNCTION?

1. Load failed to extract with a good extraction parachute.
2. Right hand crossover used to release load.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

No apparant cause. Loadmaster may have pulled the right hand crossover prematurely.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

Allow the extraction parachute to perform as designed.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-17	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 650 AGL	10. ACFT SPEED (Knots) 145 Knts	11. DZ ELEVATION (Feet) 289	12. SURFACE WINDS (Knots) Calm	13. VISIBILITY (Feet/Miles) Unrestricted

III. CARGO				
23. TYPE LOAD AND WEIGHT HE 3220 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-512/ TO 13C7-1-8	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS 2	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER Type V	27. TYPE PARACHUTE AND NUMBER G-12E (2)	28. SIZE EXTRACTION/RELEASE PARACHUTE 15-Foot Ring Slot	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT Lock #17-18
31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.) The extraction parachute deployed flawlessly and extracted load from aircraft. When DZ crew was recovering the HE and parachutes it was discovered at that time that seven suspension lines had broke.				
32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.) Suspected cause is material failure. Deployment bag had no defects.				

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ANALYSIS: 61

WHAT WAS THE MALFUNCTION?

Drogue parachute experienced severe suspension line damage.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Equipment failure. Parachute had too many drops.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. 15-foot extraction parachute used as drogues should have no more than 10-15 drops as drogue parachute.
2. Enhance/design new drogue/extraction parachute.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-17	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 650 AGL	10. ACFT SPEED (Knots) 145 Knts	11. DZ ELEVATION (Feet) 289	12. SURFACE WINDS (Knots) Calm	13. VISIBILITY (Feet/Miles) Unrestricted

III. CARGO				
23. TYPE LOAD AND WEIGHT HE 3220 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-512/ TO 13C7-1-8	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS 2	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER Type V	27. TYPE PARACHUTE AND NUMBER G-12E (2)	28. SIZE EXTRACTION/RELEASE PARACHUTE 15-Foot Ring Slot	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT Lock #17-18
<p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>The extraction parachute deployed flawlessly and extracted load from aircraft. When the DZ crew was recovering the HE and parachutes it was discovered at this time that five suspension lines had broke on the 15-foot extraction parachute.</p>				
<p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>Suspected cause is material failure. Deployment bag had no defects.</p>				

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ANALYSIS: 62

WHAT WAS THE MALFUNCTION?

Drogue parachute suspension lines found to be damaged during post drop inspection.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

Equipment failure. Parachute had too many drops.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. 15-foot extraction parachute used as drogues should have no more than 10-15 drops as drogues.
2. Procure new stronger drogue extraction parachute.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 2200 MSL	10. ACFT SPEED (Knots) 140 KIAS	11. DZ ELEVATION (Feet) 377 MSL	12. SURFACE WINDS (Knots) Calm	13. VISIBILITY (Feet/Miles) 1 Mile

III. CARGO				
23. TYPE LOAD AND WEIGHT Sequential M998 9860 (F) 9920 (A)	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-500-2/ TO 13C7-1-5	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER Type V	27. TYPE PARACHUTE AND NUMBER G-11B (2)	28. SIZE EXTRACTION/RELEASE PARACHUTE 22-Foot	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT Aft
31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.) Loadmaster called slowdown checklist complete, however the engineer had not completed the slowdown checklist. CCT called a formation No-drop, the loadmaster acknowledged the No-drop and performed No-drop procedures in accordance with MCR 55-130 Vol II. The primary loadmaster went to verify positive engagement of the left hand locks at which time he noted the aft platform had shifted 4 feet onto the ramp. He initiated Loose-Platform Emergency Procedures in accordance with MCR 55-130 Vol II; however, the ramp would not fully close and lock. (The ramp remained open approximately 5 inches.) The manual control valve was positioned to number 4 and the auxiliary pump remained on.				
32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.) A right-hand lock pull test was accomplished and all locks were within tolerance. An operational check was performed performed and right-hand lock number 11 was found to have internal damage. (Lock would not stay engaged.)				

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ANALYSIS: 63

WHAT WAS THE MALFUNCTION?

Aircraft dual rail locks failed to restrain load after a no-drop.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. #11 right hand lock had unseen internal damage.
2. Possible improper procedure after no-drop or during preflight.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Perform periodic maintenance inspection of locks.
2. Ensure proper procedures are followed.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT MC-130H	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 550 AGL	10. ACFT SPEED (Knots) 140	11. DZ ELEVATION (Feet) 123	12. SURFACE WINDS (Knots) Calm	13. VISIBILITY (Feet/Miles) 6 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT HE 2890 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-512/ TO 13C7-1-8	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS 1	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER Type V	27. TYPE PARACHUTE AND NUMBER G-12E (2)	28. SIZE EXTRACTION/RELEASE PARACHUTE 15-Foot	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT FS 537
<p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>Extraction parachute exited aircraft, failed to deploy (remained in deployment bag). Loadmasters restrained the load and cut the extraction line.</p>				
<p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>Unable to recover the extraction parachute after two searches on the area of reported cut-away. Unable to determine why the deployment bag failed to open.</p>				

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ANALYSIS: 64

WHAT WAS THE MALFUNCTION?

1. Extraction parachute failed to deploy.
2. Bag locked.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Possibly improper packing procedures.
2. Possibly improper aircrew rigging procedures.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Ensure proper packing and rigging procedures are followed.
2. Pay closer attention to detail.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 650	10. ACFT SPEED (Knots) 140	11. DZ ELEVATION (Feet) 590	12. SURFACE WINDS (Knots) 5 Knots	13. VISIBILITY (Feet/Miles) 7 Miles

III. CARGO				
23. TYPE LOAD AND WEIGHT HE Mass 2460 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-500-3/ TO 13C7-1-11	25. AERIAL DELIVERY SYSTEM USED		
		<input checked="" type="checkbox"/> DUAL RAIL	<input type="checkbox"/> CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS 1	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER Type V	27. TYPE PARACHUTE AND NUMBER G-12E (2)	28. SIZE EXTRACTION/RELEASE PARACHUTE 15-Foot Ring Slot	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT FS 650
<p>31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)</p> <p>All extraction sequences were normal. The G-12E recovery parachutes elongated and one failed to inflate. The load descended under one canopy. The load was recovered and there was no damage to equipment.</p>				
<p>32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)</p> <p>Investigation revealed the G-12E had elongated and all the ticket 5 ties had broken. The 80 lb tie at the connector link groups did not break. Suspect static electricity or improper air channel during pack.</p>				

CONTINUED ON NEXT PAGE

ANALYSIS: 65

WHAT WAS THE MALFUNCTION?

One G-12E failed to deploy.

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Parachutes were not transported correctly, i.e., field packed, exposing it to unknown/unseen damage.
2. Parachutes were not aired or shook IAW TM/TO to allow for breathing or removal of foreign objects/debris.
3. Parachutes might not have been inspected correctly nor fanned properly.
4. Parachute packing/supervision is suspect due to heavy workload and inexperienced personnel.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Follow all the proper parachute packing and care procedures.
2. Ensure manning is appropriate for workload and try and maintain some continuity.
3. Ensure facilities are maintained and have the correct equipment and space to do the mission.
4. Institute a parachute or shop quality control process.

TAR&M/SA VOL II

I. GENERAL				
1. UNIT BEING AIRLIFTED	2. DEPARTURE AIRFIELD	3. DATE	4. TYPE ACFT C-130	5. ACFT SER NO.
6. OPERATION/EXERCISE		7. DZ AND LOCATION	8. DATE AND TIME	
9. ACFT ALTITUDE (Feet) 1270 MSL	10. ACFT SPEED (Knots) 140	11. DZ ELEVATION (Feet) 483	12. SURFACE WINDS (Knots) Calm	13. VISIBILITY (Feet/Miles) 5+

III. CARGO				
23. TYPE LOAD AND WEIGHT Heavy Training Platform 3500 Lbs	24. RIGGED IAW (TM/TO/NAVAIR No.) FM 10-512/ TO 13C7-1-8	25. AERIAL DELIVERY SYSTEM USED		
		DUAL RAIL	CDS RELEASE GATE	OTHER (Explain)
		NO. PLATFORMS 1	NO. CONTAINERS	
26. TYPE PLATFORM/AIR-DROP CONTAINER Type V	27. TYPE PARACHUTE AND NUMBER G-12E (2)	28. SIZE EXTRACTION/RELEASE PARACHUTE 15-Foot	29. LENGTH OF REEFING LINE	30. POSITION OF LOAD IN AIRCRAFT FS 517

31. DESCRIPTION OF MALFUNCTION/FAILURE/ DAMAGE INCURRED (if more space is needed, continue on reverse.)

Slowdown checks were completed, the left hand locks were retracted and the loadmasters visually checked them. Before extraction the number 11 left hand lock fell back in. During the extraction, the #5 dual rail cover popped up approximately 1 foot into the air and the platform jammed the lock back out of the dual rail and broke the lock on the back side. The platform exited with no further incident.

32. CAUSE OF MALFUNCTION/FAILURE (If more space is needed, continue on reverse.)

The number 11 left hand lock fell back in due to the simul rod sleeve sliding off. The pre-flight of the rails and the first heavy equipment drop went without incident.

CONTINUED ON NEXT PAGE

ANALYSIS: 66

WHAT WAS THE MALFUNCTION?

The number 11 left hand lock was broken during extraction of heavy equipment

WHAT COULD HAVE CAUSED THIS TO HAPPEN?

1. Failure to conduct proper pre-flight checks.
2. Equipment failure allowing lock to fall back.

WHAT SHOULD YOU DO TO KEEP THIS FROM HAPPENING?

1. Ensure proper procedures are followed IAW TOs.
2. Ensure periodic maintenance inspection of dual rails is performed.

**SUMMARY OF
SUPPLY AND EQUIPMENT DROPS**

2D TRIANNUAL CY 1999

	PLATFORM LOAD		SINGLE CONTAINER		CDS		TOTAL	
Number of Drops	1553		238		1598		3389	
Number of Malfunctions	20		2		21		43	
Percentage of Malfunctions	0.0129		0.084		0.013		0.0127	
Malfunction Phases:	IP	EF	IP	EF	IP	EF	IP	EF
Extraction	5	4	1	0	2	15	8	19
Deployment-Recovery	11	0	1	0	4	0	16	0
Release	0	0	0	0	0	0	2	0

IP-Incorrect Procedures

EF-Equipment Failure

**SUMMARY OF
PERSONNEL PARACHUTE JUMPS**

2D TRIANNUAL CY 1999

		C-17	C-130	C-141	OTHER	TOTAL
Nonmaneuverable	Number of Deployments	0	32,008	21,883	2,109	56,000
	Number of Malfunctions	0	3	0	0	3
	Percentage of Malfunctions	0.00	0.093	0.000	0.000	0.053
Maneuverable	Number of Deployments	0	3,985	698	5,469	10,152
	Number of Malfunctions	0	4	2	0	6
	Percentage of Malfunctions	0.00	0.010	0.029	0.000	0.060
Free-Fall	Number of Deployments	0	2,712	8,087	2,856	13,665
	Number of Malfunctions	0	9	1	5	5
	Percentage of Malfunctions	0.00	0.033	0.012	0.018	0.011
Total	Number of Deployments	0	38,705	30,618	10,434	70,807
	Number of Malfunctions	0	16	3	5	24
	Percentage of Malfunctions	0.00	0.041	0.098	0.048	0.033

**SUMMARY OF
PERSONNEL PARACHUTE MALFUNCTIONS**

2D TRIANNUAL CY 1999

	NON- MANEUVERABLE	MANEUVERABLE	FREE-FALL	RESERVE
Number of Deployments	56,030	10,152	13,655	19
Number of Malfunctions	3	6	15	1
Towed Jumper	2	0	0	0
Broken Static Line	0	0	0	0
Entanglement	0	3	0	0
Failed to Inflate	0	0	0	1
Inversion	0	0	0	0
Pilot Chute	0	0	0	0
Semi-inversion	0	0	0	0
Suspension Lines	1	0	0	0
Other	0	3	15	1
Percentage of Malfunctions	0.054	0.056	0.011	0.053
Fatalities	0	0	1	1

*Injuries

**INJURIES OCCURRING ON PARACHUTE OPERATIONS
AS REPORTED ON DA FORM 285**

1 APRIL - 30 JUNE 1999

	C-17	C-130	C-141	UNKNOWN	TOTAL
PLF-Related Injuries	0	10	2	22	34
Main Malfunction	0	0	0	0	0
Misrouting of Static Line	0	1	1	1	3
Entanglements	0	0	0	0	0
Tree Landings	0	1	0	3	4
In Aircraft	0	0	0	1	1
Hazards on Drop Zone	0	0	0	0	0
Other	0	0	0	3	3
Insufficient Information	0	0	0	1	1

AIRCRAFT MALFUNCTIONS

These malfunction reports are not included in the statistical data nor reflected in the percentage of malfunctions. All aircraft systems malfunctions which may have led to an abort or no-drop are constantly reviewed and analyzed for repeat or recurring trends and solutions. Corrective actions are recommended through Air Force maintenance systems.

PERSONNEL DROPS	
Improperly operating doors or ramps	0
Static line retriever	0
SUPPLY AND EQUIPMENT DROPS	
Rail locks	6
Improperly operating ADS	0
Improperly operating doors or ramps	0
Release mechanism	0
Electrical system	4
CONTAINER DROPS	
Rollers	0
Type XXVI gate	0
Static line retriever	10
Center Line Vertical Restraint (CVR)	0
TOTAL	20

HOT POOP

1. When attaching the EFTC mounting brackets on a 28- or 32-foot type V platform that has three sets of mounting bracket holes, use only the rear most set of holes.

2. The following message was sent out from Fort Lee concerning skidboards:

UUUUUR291000ZOOCT99

UNCLAS

SUBJECT: PREPARING SKID BOARD FOR DOUBLE OR STRETCH A-22 CARGO BAG LOADS

1. REFERENCE FM 10-500-3/TO 13C7-1-111, RIGGING CONTAINERS, DATED 8 DECEMBER 1992, AND CHANGE 1, DATED 26 SEPTEMBER 1996.

2. WHEN PREPARING A SKID BOARD FOR A DOUBLE OR STRETCH A-22 CARGO BAG LOAD, MAKE A DIAGONAL CUT IN EACH CORNER OF THE SKID BOARD AS SHOWN IN FIGURE 9-1, OF CHANGE 1, FM 10-500-3.

3. THE UPDATE WILL BE INCLUDED IN THE NEXT CHNAGE/REVISION OF FM 10-500-3.

4. THESE PROCEDURES HAVE BEEN COORDINATED AND APPROVED BY THE U.S. ARMY SOLDIER SYSTEMS CENTER AND THE U.S. AIR FORCE AERONAUTICAL SYSTEMS CENTER.

5. THE POINT OF CONTACT FOR THIS ACTION IS ROGER HALE, DSN 687-4769 OR COMMERCIAL 804-734-4769.